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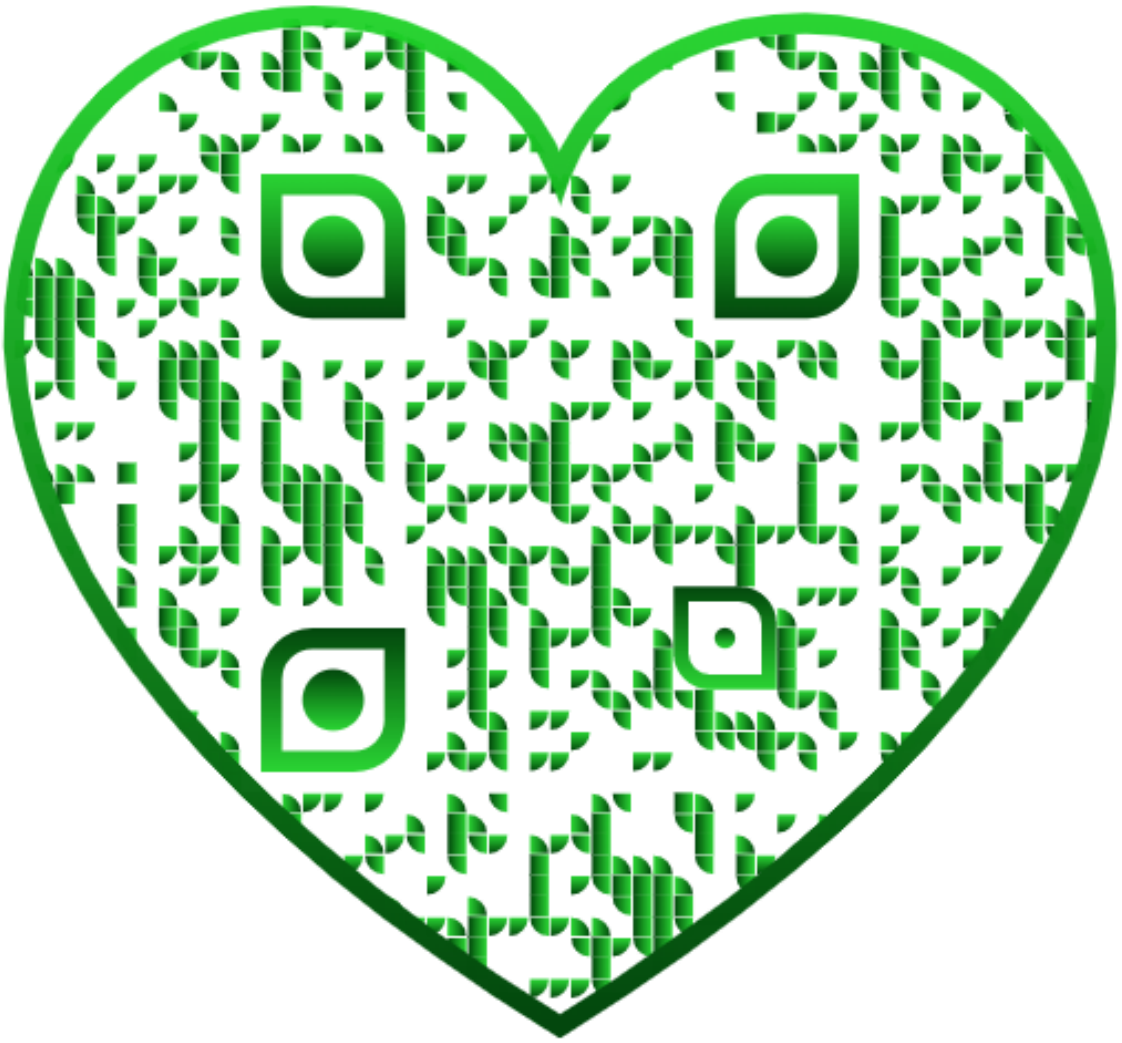
lp

ANALOG HIFI AND VINYL CULTURE



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The tiny scandal

Now that pretty much everyone has shared their two cents about the MoFi affair, I can‘t help but share my opinion on what happened.

Oh, you don‘t even know what it‘s about? Then a bit of info: The American remastering specialists from Mobile Fidelity recently fell out of favor because in many cases they deviated from the path of analogue virtue and did not use the master tapes of the corresponding albums directly for their remastering, but inserted a digital intermediate step to have. Want to say: A MoFi man with a powerful DSD recorder turned up in the holy of holies of the record companies and made a high-quality, but ultimately digital copy of the analogue master, which served as the basis for analogue remastering.

Personally, I see things in two ways: From a purely sonic point of view, I consider the digital intermediate step to be completely uncritical. I remember my work with various DSD recording devices from the manufacturer Korg, which I consider to be completely transparent in terms of sound. I couldn‘t tell any difference between the recording and the original at the time, no matter how hard I tried. And what MoFo is doing there should technically be of a completely different caliber. The process also gives MoFi people access to recordings that they would otherwise never have had access to. I have a number of American reissued records in my closet and some of them rank as some of the best vinyl ever.

Nevertheless, of course, there is an unpleasant aftertaste. The fact is: the intermediate digital step was kept secret and the customers were ultimately deceived. That will not do. The extent of the image damage caused will be shown by the sales figures for the remaster of Michael Jackson‘s „Thriller“, which is set to sell an ambitious 40,000 copies. There is also no question that numerous MoFi discs offered in small numbers at pithy prices should not have been so rare and therefore so expensive, because with the help of the digital tape copy any number of pressing tools could have been produced. That‘s not really okay either.

However, we are probably a long way from the demise of analog culture that has been propagated in numerous places on the Internet. Ultimately, a typically human way of betraying yourself has come to light here: greed eats brain.

Holger Barske, Editor in Chief

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New power tubes

For their 75th anniversary, the Fürth, Frankonia based tube specialist BTB presents its new „Carbon“ power tube series with the types S4A EL34 Carbon, S4A KT88 Carbon and S4A 6550C Carbon.

By optimizing the cathodes and using carbonized anodes for the highest current delivery capability, you get the last little bit of power out of the corresponding amplifiers. In terms of sound, the new types are to be distinguished by particular speed in conjunction with best resolution.

The „Carbon“ series will replace the S4A performance power tubes in the future and, which is particularly important given the current market situation, are now available from stock. An S4A EL34 Carbon, for example, currently costs about 48.80 Euros, matched pairs and quartets are available for a minimal surcharge.

Contact: BTB Elektronik, Fürth
Phone: +49 911 288585
Internet: btb-elektronik.de

LP-12 upgrades

The Scottish manufacturer Linn has been loyal to its LP-12 record player since 1973. Hardly any other device on the market has such a rich product history. The manufacturer is still trying to adapt its classic to the changing times and to ensure that the LP-12 can play in the analog upper house. And so there are currently two new upgrades for the oldie.

The Arko tonearm has gone back to basics, removing all elements of tonearm design that are critical to success and reducing them to their essence. This tonearm features an ultra-stable gimbal platform, it moves in space with a minimum of resistance. 7075 aluminum is the only material used. This directs unwanted resonances away from the sensitive generator and through the sub-chassis outward.

If you combine Arko with its perfect partner, the Kendo moving coil cartridge with aluminum housing, this energy transfer is improved even further. Equipped with a Boron cantilever, the Kendo is an offshoot of the top model Ecstatic and has inherited many of its characteristics. Kendo also has a stable, nickel-coated 7075 aluminum body and therefore fits perfectly with the Arko. The tonearm can be purchased for 3570 euros, the cartridge for 3332 euros.

Internet: linn.co.uk

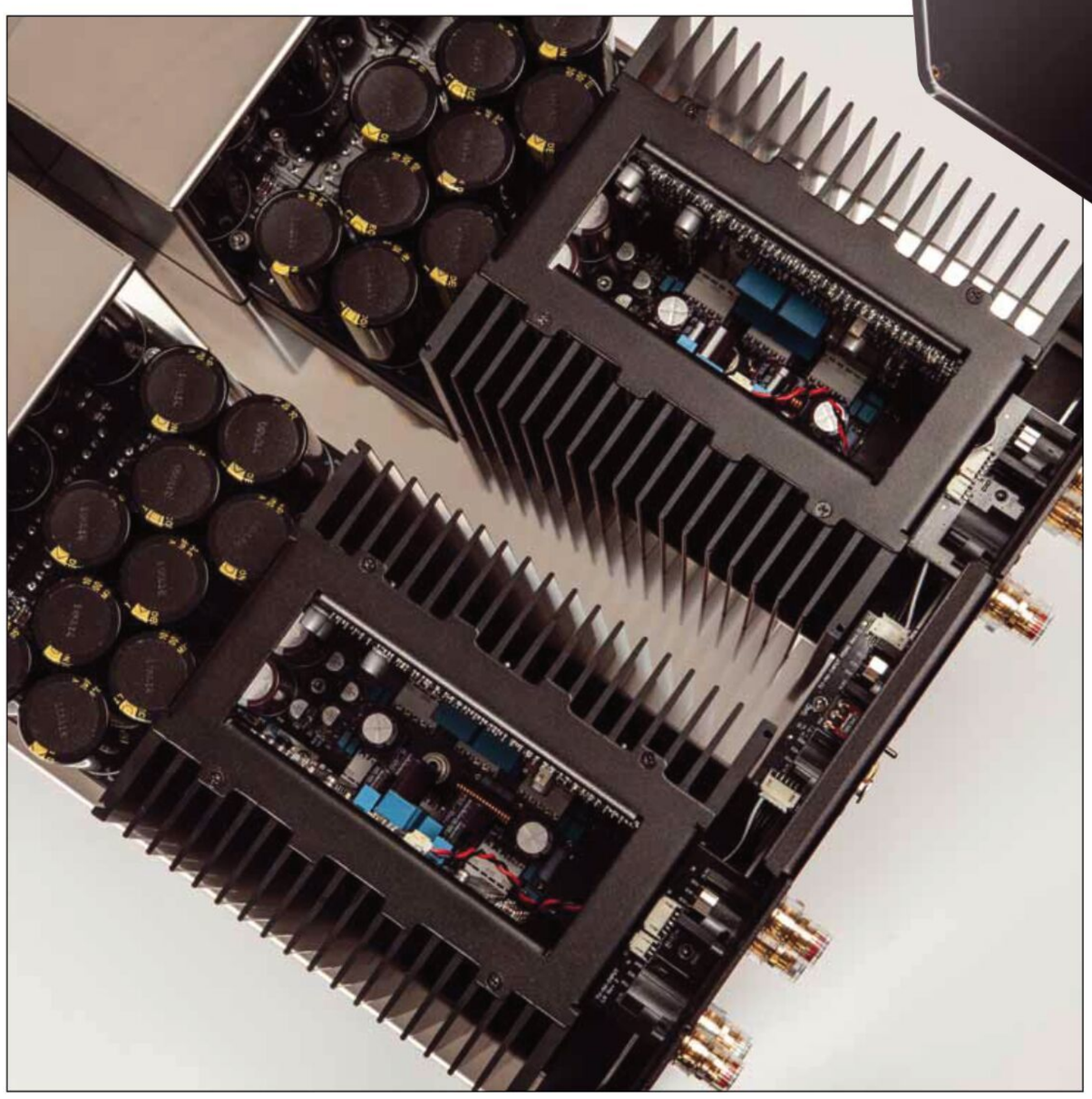
Top-of-the-line power amplifier from Elecrocompaniet

With the AW800M, the Norwegian electronics specialist Elecrocompaniet presents a new power amplifier flagship that shines with plenty of power and flexibility. The manufacturer specifies an output power of 300/600/1000 watts at 8/4/2 ohms per channel, you can also use the amplifier in mono bridge mode and then get 800/1500/2200 watts.

The device, which has the classic EC design, weighs an impressive 55 kilograms. Particular attention was paid to a potent power supply, the mains processing is handled by double-shielded toroidal transformers and plenty of capacitance. Of course, XLR and cinch connections are available on the input side, and double screw terminals on the output side. The strict

The is unit is strictly constructed in double mono fashion, is said to cost around 24,000 euros.

Contact: MRV, Bonn
Phone: +49 228 92394292
Internet: mrvaudio.de



Mission 770: A Legend Returns

The traditional British manufacturer Mission is reviving one of the milestones in its company history: The new edition of the legendary Mission 770 loudspeaker pays homage to the acoustic and design virtues of its historical model and at the same time brings it into the modern age. Regardless of the classic, simple design, the current Mission 770 offer the latest driver technologies and a crossover that has been optimized in countless listening tests, thus combining the legendary mid-range reproduction of classic British BBC loudspeakers with contemporary detail, linearity and dynamics.
A true high-end speaker, the Mission 770 is paired with the included
stands manufactured directly at the company's headquarters in Huntington, Cambridgeshire, UK.
While the historical model, like the BBC speakers, used a thin, bitumen-damped housing material to minimize discoloration in the mid-range, the current version uses a sandwich construction made of high-density MDF and chipboard, which are bonded with vibration-absorbing adhesive. As a result, the natural resonance of the housing could be reduced below the threshold of hearing. In addition, internal braces ensure even more rigidity and ensure the best working conditions for the woofer without over-damping the bass range.
The housing and the bass reflex port have been meticulously adapted to the new woofer and enable a lower cut-off frequency of an impressive 30 Hertz. The completely redesigned tweeter is based on a microfiber dome with a musical, smooth response.
Its special chassis construction suppresses natural resonance
the cut-off frequency of the crossover, which, in combination with the woofer, ensures a fascinatingly linear and astonishingly spatial reproduction across the entire hearing spectrum.
The Mission 770 is available in walnut or black. The suggested retail price per pair is 4500 euros. The matching high-quality speaker stands are included in the scope of delivery.

Contact: IAD, Korschenbroich
Telephone: +49 800 2345007
Internet: iad-gmbh.de

Affordable symmetry

The Austrian manufacturer Pro-Ject has been causing a stir for some time with its symmetry offensive. We, too, have already been convinced of the advantages of symmetrical signal processing directly from the (MC) pickup. Entry into the symmetrical world has now become even cheaper, because with the Pro-Ject X2 B, the most affordable turntable to date is in the starting blocks at 1600 euros (including pickup), which allows the uncompromising type of connection. In conjunction with a symmetrical cable that keeps the four signal-carrying wires and the shielding consistently separate, as well as a suitable phono preamplifier, every record lover benefits from fully symmetrical signal routing, a higher signal-to-noise ratio and crystal-clear vinyl sound.
The electronic speed selection spoils you with comfort when you want to switch between 33 and 45 rpm.
The heavy, dense and rigid MDF cabinet reduces unwanted resonances to almost immeasurable levels. Inside is a sophisticated DC/AC motor controller which, combined with electronic speed switching, provides clean and stable power to the motor system.
The tapered tonearm tube of the slightly longer tonearm of the X2 B has a larger diameter and is made of a carbon fiber/aluminium composite material with optimum damping values. It has a high level of rigidity and an impressive lack of resonance. The high-quality tonearm bearings compensate for the higher mass of the arm and allow the arm tube to be moved with almost no mechanical inhibition. The cabling is consistently symmetrical with complete separation of signal-carrying conductors and shielding.
An Ortofon MC Quintet Red MC pickup system is mounted and adjusted ready to play. This means that a true balanced connection is already possible ex works, for example with the Pro-Ject Connect it Phono E Mini-XLR cable and the Pro-Ject Phono Box S3 B preamplifier.

Contact: Audiotrade, Mülheim
Phone: +49 208 882660
Internet: audiotra.de

Sorting optins

At the latest since the cult film "High Fidelity" it has become clear to many how complex and individually different, even bizarre, the possibilities are to sort your music collection.
One possibility is alphabetical order, possibly combined with upper sections by genre. That's why the arTab markers are now also available with distinctive symbols for different music and styles.
A set of preset genre icons on 6 classic stainless steel markers will be available for 42 Euros.
The completely new genre set with 6 markers made of colored anodized aluminum will be offered for 78 Euros.

And because everyone has different associations with symbols, from the end of October 2022 there will also be the option of specifying your own motifs, which arTab will apply to the desired markers by hand. Each of your own symbols will be charged with a surcharge of 38 Euros per motif.

Of course, there will also be the option of ordering each marker individually and configuring your own set.

Contact: arTab Oliver Melhaff
Phone: +49 221 99874664
Internet: artab.eu

Race Horse for Rookies

The market is full of cartridges with four- or even five-digit price tags. Apart from the usual suspects, is there anything that sounds really good and is also affordable for ordinary mortals?

Teammates

Turntables:
· TechDAS Air Force III / Reed 3p / Reed 1x / Infinity Black Widow

Phono Preamplifiers:
· MalValve preamp three phono DIY with tubes

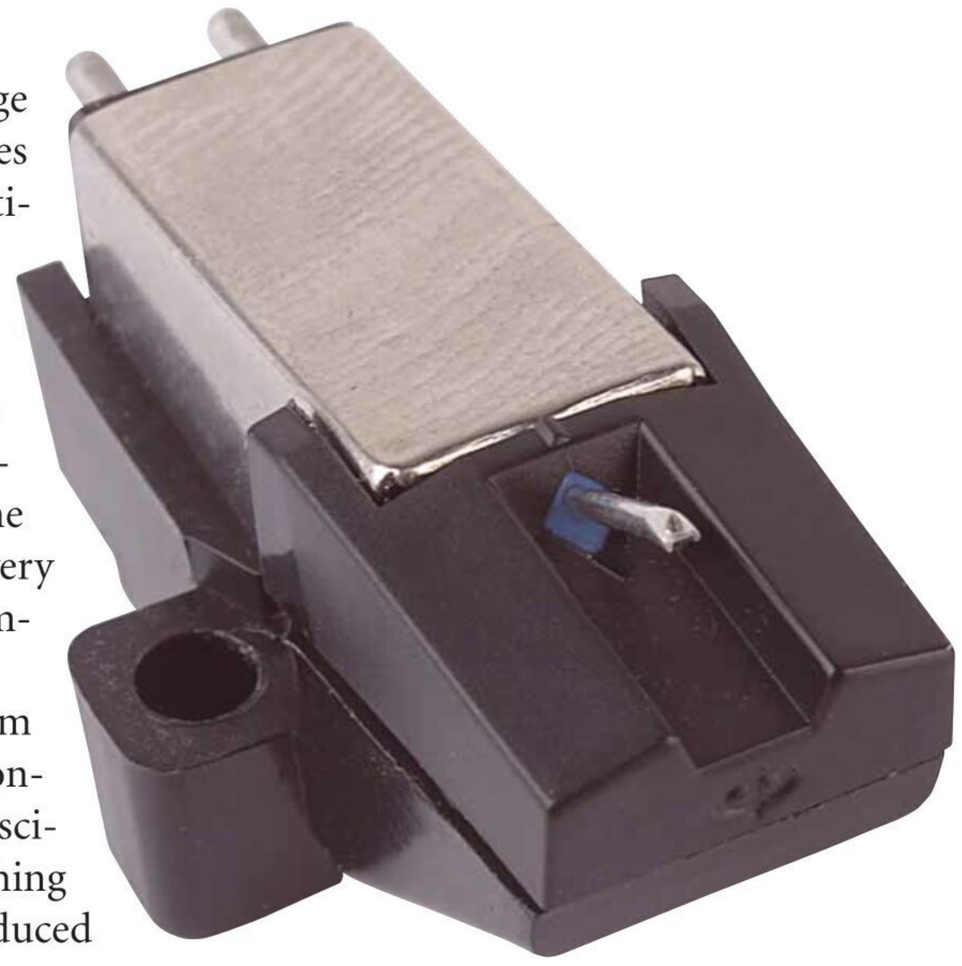
Preamplifier:
· NEM PRA-5

Power Amplifier:
· Silvercore Collector's Edition

Loudspeakers:
· DIY Focal / JBL

Competitors

Cartridges:
· Audio Technica AT-5V
· DS Audio DS003
· Ortofon Per Windfeld Ti



As usual with MMs, the needle insert is also interchangeable on the Mustang

Maybe there is. This cartridge for 300 EUR at least comes with the promise to stand in practically no way inferior to full-grown cartridges. The „Mustang MM" is a Japanese-made cartridge based on the MM principle, as the name suggests. It has matured into a product through the initiative of the distributor Axiss Europe, which is very reserved in details about the unembellished cartridge.

To address the elephant in the room right at the beginning: I cannot confirm the myth spread on the omniscient Internet that the Mustang is nothing more than a rebranded mass-produced system from Sanyo. Although the system body has a certain optical similarity, it differs from the Mustang. For example, the Mustang lacks the typical adjustment screw for the suspension. The specifications don't match either; the Mustang has to be driven with much more force than the Sanyo. It is possible that both ultimately come from the same source, but they are by no means identical.

The Mustang MM is delivered in a nice cardboard box with a manual, screws, and nuts

From a purely visual point of view, the Mustang doesn't look like much. The rear section is dominated by the generator, which is clad in unadorned sheet metal, and the rest of the molded parts are made of plastic and were apparently injection molded. This is how we have known it for over half a century from numerous cartridges. The needle insert is replaceable, as befits an MM, should the need arise. An elliptically polished pickup diamond sits at the end of the aluminum needle carrier. For this purpose, the aluminum tube was compressed at the front, drilled with a hole, and the diamond was shot through. This way, it forms a highly intimate connection with the stylus cantilever.

When installing the Mustang, you have to deal with a few typical Japanese peculiarities: For example, there are no threads countersunk in the system body, so you have to fiddle with nuts on the cartridge when installing it. You can practically only maneuver them into place if you remove the needle guard, which doesn't make things any more pleasant. It all works, but it's not up to date – just as little as the lack of color markings on the pickup pins for connecting the headshell squiggles. Sure, the manual tells you which wire goes where, but it's easier with four color blobs.

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Daily Thompson – God Of Spinoza

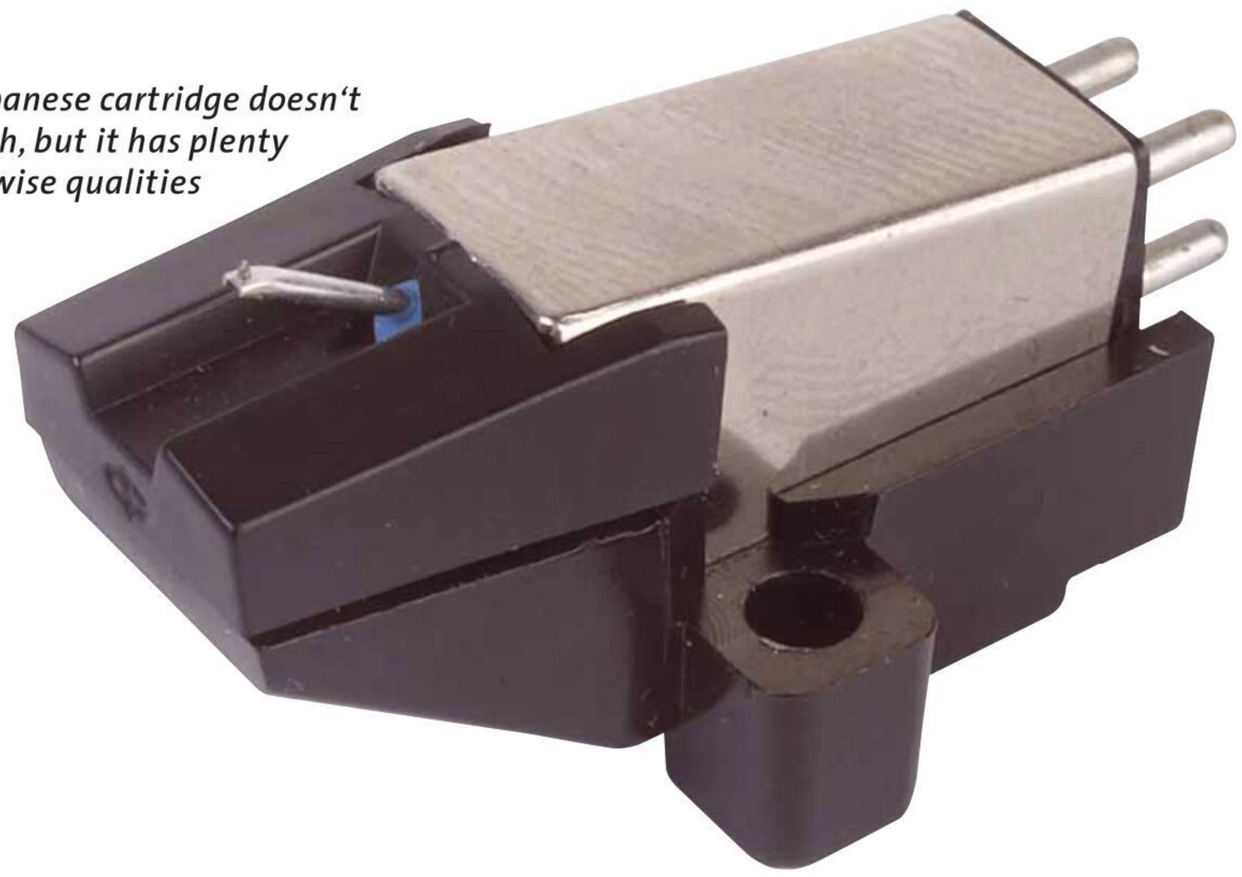
What we played

Daily Thompson
God Of Spinoza

Joe Lovano / Trio Tapestry
Garden Of Expression

El Caco
Hatred, Lov & Diagrams

Mandragua
Chimes At Midnight



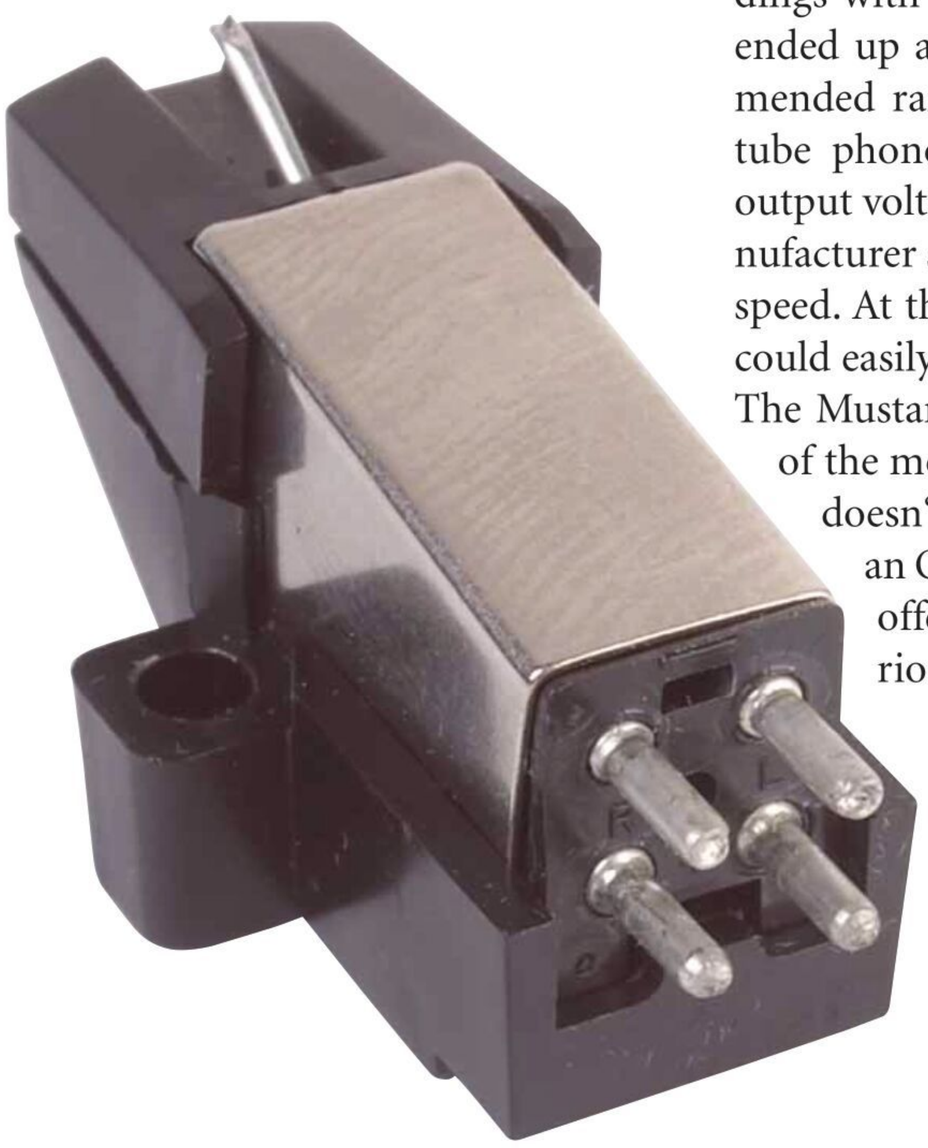
Externally, the Japanese cartridge doesn‘t look like much, but it has plenty of sound-wise qualities

The manufacturer calls the Mustang‘s needle compliance „medium to high“ and advises using light to medium-heavy arms. In my experience, you shouldn‘t overdo it with „light.“ The mounting resonance was too high when used on a classic like the Infinity Black Widow. Distributor Jörg Labza advised me to try heavier arms anyway, and I had no problems with the Reed 1x, which weighs slightly more than 15 grams; on the contrary, the arm and system got along very well right away. Unusual for an MM: the high required contact weight of three to three and a half grams. I tried the usual two grams but didn‘t get any decent readings with them and, in the end, actually ended up at the upper end of the recommended range. My 50-decibel amplifying tube phono was happy to get plenty of output voltage from the Mustang. The manufacturer specifies 1.7-3.4mV at 3.54cm/s speed. At the more common 5.5cm/s, that could easily be 5mV, which seems realistic. The Mustang MM is simply a celebration of the moving magnet principle. Sure, it doesn‘t come close to the subtlety of an Ortofon Windfeld Ti, nor does it offer much in the way of the superior stability and speed of the DS Audio DS003, but it rocks. Really. Quite easily ascertainable with „God Of Spinoza,“ the current work of the Dortmund straight rock band „Daily Thompson.“ This is precisely how a dirty guitar, gritty drums, and a gnarly bass have to work together. Rough, but not imprecise; voluminous, but not sloppy. The impression is confirmed on the wonderfully smooth „Chimes At Midnight,“ Madragua‘s comeback album. What the Mustang retrieves in terms of smoothness and energy from the voice is excellent. In many ways, the Mustang reminds me of my beloved and, unfortunately, no longer produced Audio Technica AT-5V, but the Mustang can be even more resinous and voluminous.

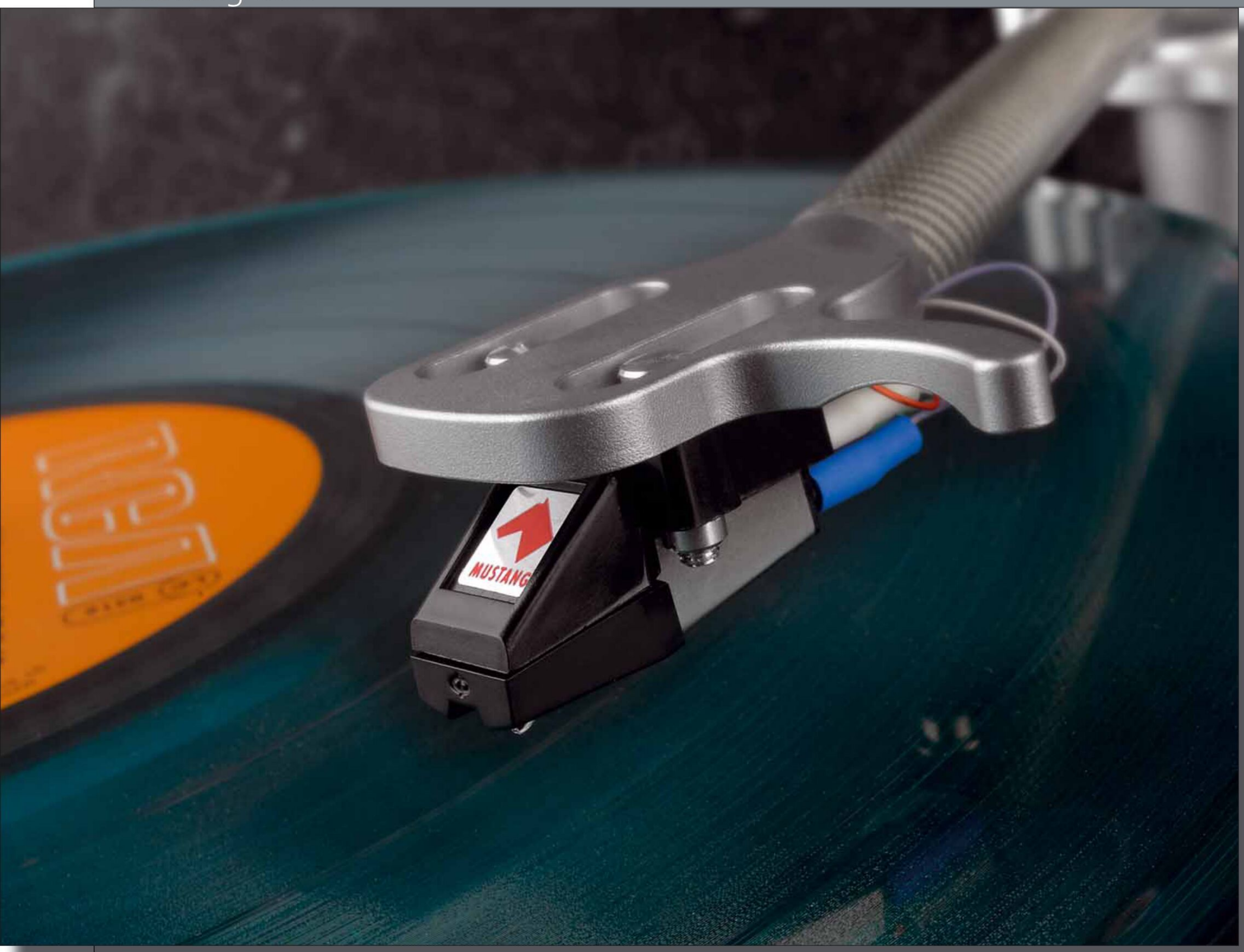
Can you listen to jazz with it? Of course! Joe Lovano and the Trio Tapestry offer pure ECM atmosphere on „Garden Of Expression“: The Mustang traces the percussion in a finely chiseled way, gives substance to the piano strokes, and even produces the blowing sounds of the saxophone very convincingly. And? What is ultimately missing in the sound of the Mustang? As long as you don‘t hear a real heavyweight in a direct comparison – nothing.

Holger Barske

Colored markings for attaching the pins would be lovely, but it works just as well in a pinch



Mustang MM



· Price	approx. 300 Euro
· Distribution	Axiss Europe, Hofheim
· Phone	+49 234 3254190
· Internet	axiss-europe.de
· Warranty	2 years
· Dimensions (W x H x D)	300 x 854 x 310 mm
· Weight	approx. 4.5 g

lp

Mustang MM

International 3/22

»The Mustang MM advertises the MM principle: it plays boldly and colorfully, creates a realistic spatial illusion and also has a fine hand for details. If you want significantly more, you have to dig much deeper into your pocket

CADENZA
Technics
aie.d
urntable 751

Much More Than Nostalgia

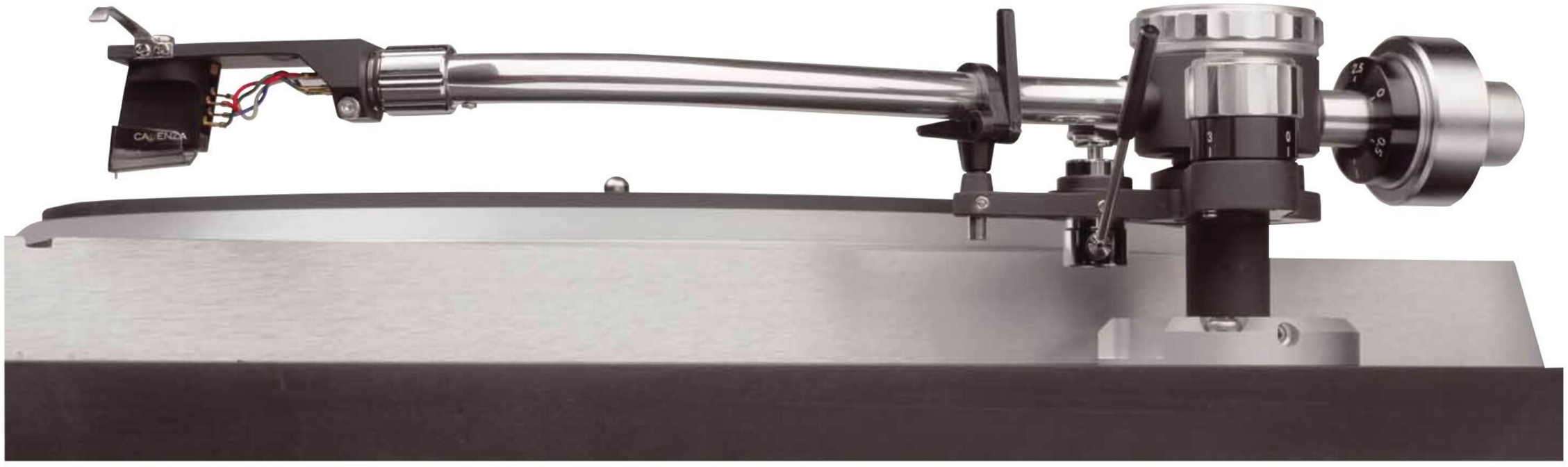
Be honest: Looking at the title of this LP issue, you also briefly felt propelled half a century into the past, right?

Not much to look at, but sound-wise it's a blast: the AIE 751

And there's a good reason: What you can partly see there doesn't just look like Technics components from the Q seventies – it is one. But how is it possible that, in 2022, we declare a record player to be a cover model that saw the light of day in 1975 and has definitely not been built since 1982?

Okay, first, a little history: The device in question is the Technics SP-10 MK2 turntable. It succeeded the SP-10 in 1975, which appeared in 1969, and was the first ever mass-produced direct-drive turntable. Between 1982 and 1986, there was the successor model SP-10 MK3 and since Technics' reboot in 2018, the SP-10 R. The MK 2 is

Jelco's TK850S is a smart addition to the Technics drive



the classic par excellence; like its counterparts, it consisted only of a turntable unit and a power supply. That first had to be built into a den and supplemented with a tonearm to make it a unit ready to play. The SP-10 is a radio drive designed for relentless reliability and technical quality. Its synchronization values and ability to reach its rated speed after only a quarter turn of the platter are legendary to this day. And now someone comes along and puts a turntable on the market that is based on brand new SP-10 MK2 turntables. The man's name is Michael Altmann; he runs an engineering office in Mainz, and since his first encounter with the SP-10 MK2 more than 25 years ago, he had the idea that it might be a good idea to stock up on the devices. And so he bought up the entire remaining stock of a then large dealer and stored it in the unopened original packaging in a perfectly air-conditioned, professionally monitored environment for 25 years. Last year, Michael Altmann thought the time had come to lift his treasure and build a complete turntable based on the SP-10 MK2. It is now available for purchase, fully equipped with tonearm and cartridge. The bad news is the price: The „Turntable 751" costs EUR 34600 fully equipped. Michael Altmann argues that, quite the engineer that he is, as „quite normal industrial calculation" and points out that 25 years of storage costs have also been included here.

From a purely visual point of view, the 751 has a pleasantly simple appearance. It is determined by the almost square silver-colored turntable embedded in a 20-millimeter thick black anodized aluminum plate. To the right of the turntable is another classic that is no longer available: a nine-inch Jelco tonearm. This manufacturer ceased operations last year after a hundred years in business; Michael Altmann has also stocked up on enough material. The tonearm sits in the standard mounting collar, which is deliberately screwed tightly to the base; Michael Altmann considers the most

Teammates

Phono preamplifiers:
· DS Audio DS 003
· Malvalve preamp three phono

Integrated amplifier:
· Thivan Labs 811 Anniversary

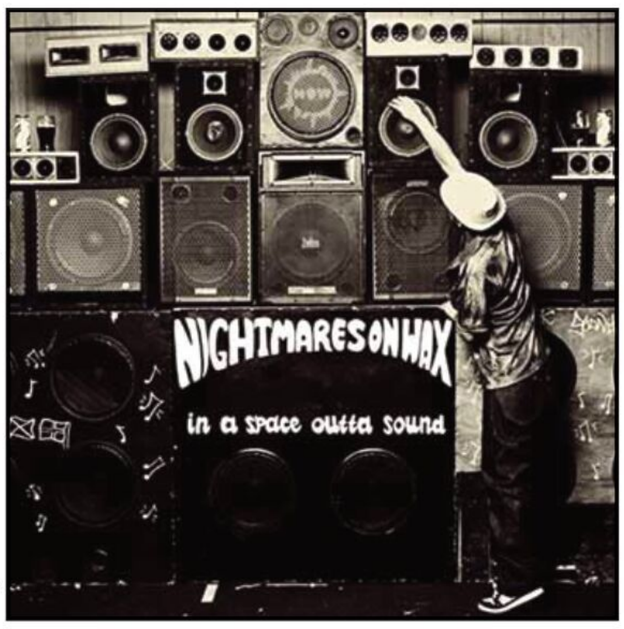
Loudspeakers:
· DIY Focal / JBL

Competitors

Turntables:
· Technics SL1000 MK2 / EPA-100
· TechDAS Air Force III / Reed 3p / Reed 1x

Cartridges:
· DS Audio DS 003
· Ortofon Per Windfeld Ti

A – non-folding – dust cover comes as standard



Nightmares On Wax – In A Space Outta Sound

What we played

Nightmares On Wax
In A Space Outta Sound

Don Ellis
Soaring

Asteroid
S/T

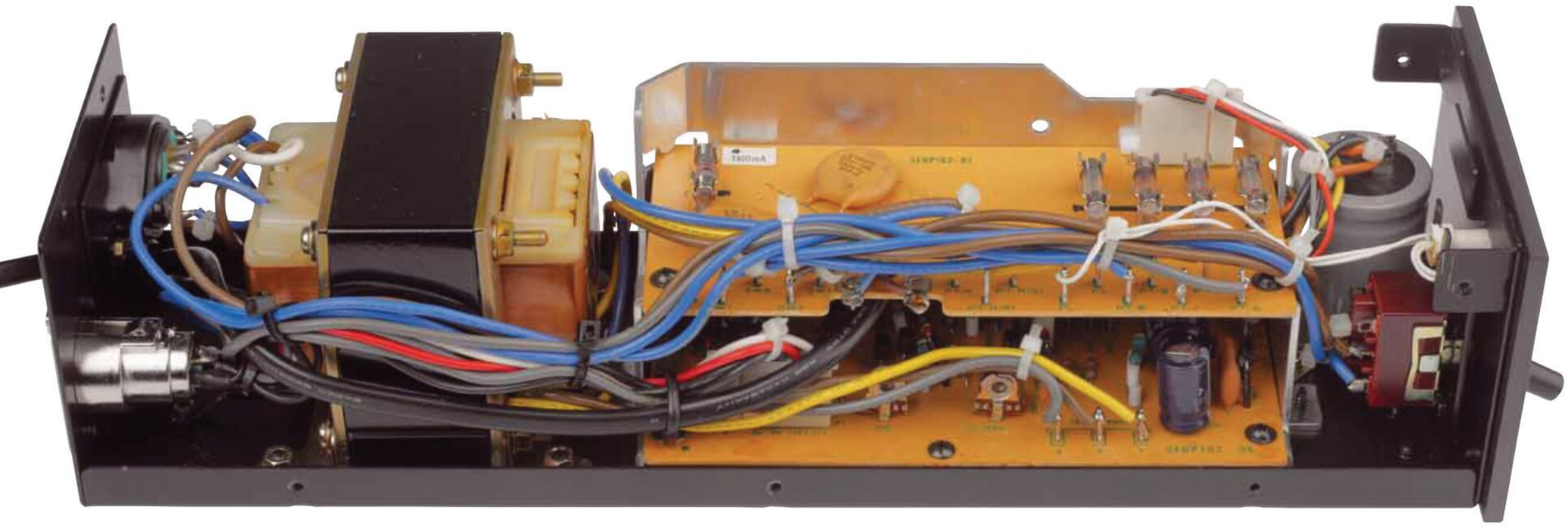
Led Zeppelin
How The West Was Won

Ortofon's smallest cartridge with Replicant 100 diamond is standard equipment

Technics chocolate brown equipment fronts are legendary to this day, like that of the SP-10 power supply

rigid possible connection between the tonearm and platter axis very important. There is more to the unit than first meets the eye: For example, there is the heavy brass block under the driver on the left side – this serves to place the center of gravity of the turntable precisely on the position of the platter axle.

The SP-10 MK2 was not intended to „stand on its own two feet," but here it does. For this purpose, the designer has put some effort into damping elements, which should enable the best possible decoupling of the device from the ground. According to reports, it should sound noticeably better than with a suspended drive.

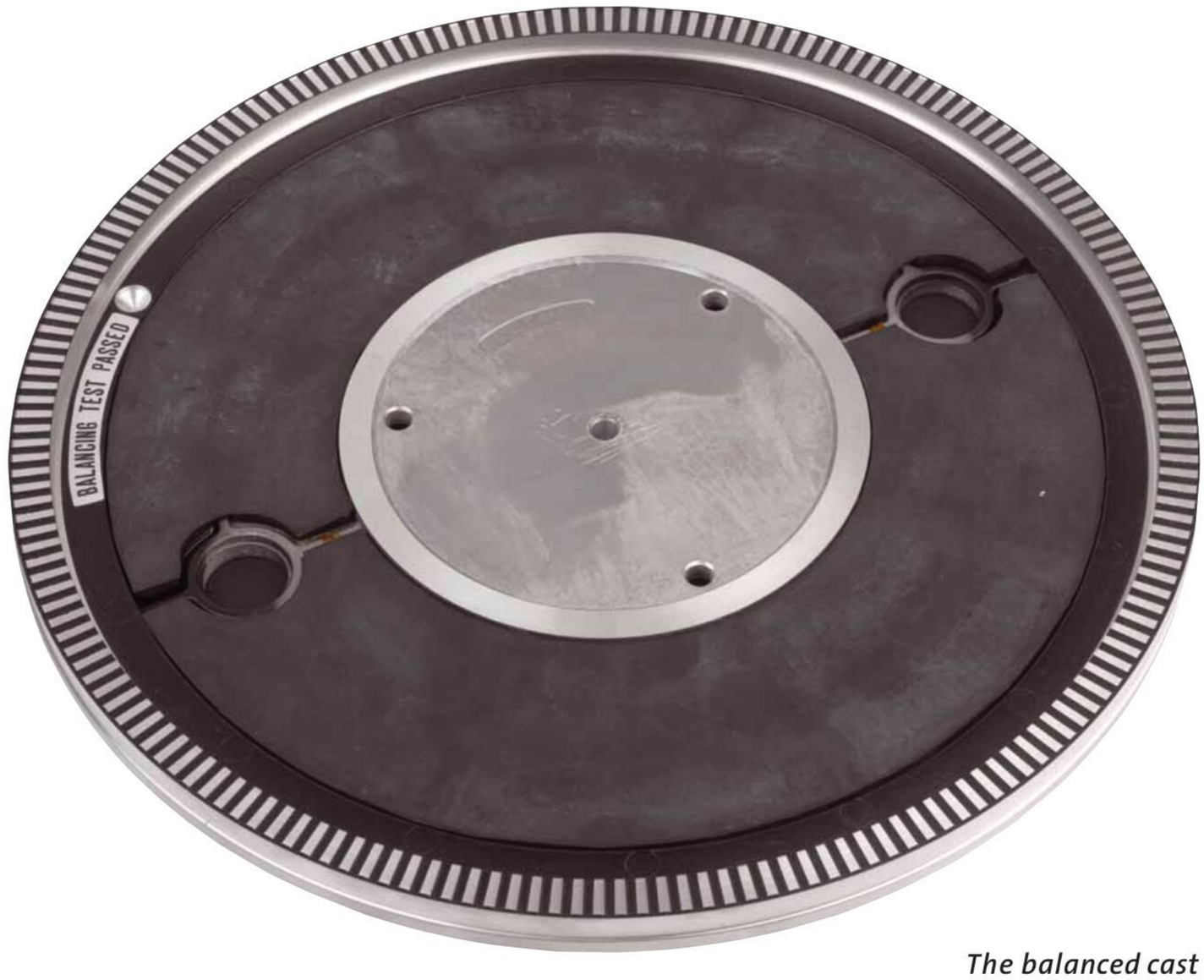


Built half a century ago, yet brand new: the power supply of the SP-10 MK2

Handling the device is an absolute pleasure for veteran HiFi fans. Being the owner of two Technics SP-10 MK2s in various stages of completion myself, I immediately feel at ease with the unit. It starts with the satisfying clack of the toggle switch on the front of the power supply and doesn‘t end with the presence of the wired remote for starting and stopping the platter. And indeed, everything runs a bit tighter than on my two oldies, which haven‘t spent 25 years in slumber.

A few words about the SP-10 MK2 itself: It was the first turntable to implement quartz stabilized speed control via PLL („Phase Locked Loop“). With no other technology, such speed stability is possible. Moreover, an adjustment is never necessary here. It feels amazingly modern after all these years. If you spend so much money on a turntable, you want security if something should break: With the SP-10 MK2, the problem is much smaller than with all other direct-drive turntables from the great era of Japanese turntables. The control uses digital standard („TTL“) chips, which are still produced. There are 14 of them, plus 108 individual transistors and 32 other semiconductors. The almost three-kilogram heavy platter of the device is screwed to the drive motor; otherwise, it would slip mercilessly at the acceleration rates that appear here. You can get a bit addicted to this motor just by pressing the large-sized start/stop button completely without any purpose. What the platter does in the process has something of what a Tesla does on the road.

The Jelco TK850S tonearm is a good choice. Extremely smooth-running knife bearings are used there, with 13.5 grams of effective mass; it is medium-heavy and gets along excellently with the Ortofon Cadenza Bronze. The manufacturer reports a bass resonance of ten hertz - precisely where we want it. The arm is adjustable in height, and the anti-skating is adjustable via a rotary knob. A high-quality tonearm cable (Jelco JA502) is included. Unfortunately, this robust and unpretentious tonearm is no longer manufactured.



The balanced cast platter bears stroboscope markings on its underside

The combination with the Cadenza Bronze was a good idea. It is the smallest cartridge in the Ortofon range with the Replikant 100 diamond, whose extremely fine and detailed reproduction has been noticed several times. This turntable complements that aspect with a foundation that is truly second to none. It only took a few moments of listening to the legendary Nightmares

The Jelco tonearm‘s cutting-edge bearings are located under the lid

The brass block shifts the center of gravity of the drive to the desired position

The drive comes in one hundred percent original packaging

On Wax album „In A Space Outta Sound," and I knew: I need to get busy with my two SP-10s. What Altmann's 751 delivers here in sovereign nonchalance doesn't happen often. Not overly hard but completely relaxed and tongue-in-cheek, the unit blasts the album's famous electronic escapades into the room. Unflinchingly, it keeps track of everything, and the projected space is large and stable if you can say that for largely electronic music. The massive Wall Of Sound is impressive in any case. I don't like to say it: My beautiful original MK2 in obsidian frame with EPA-100 tonearm (it was called SL-1000 MK2 in the form) can't keep up. The fireworks that Don Ellis and his crew set off on „Soaring" simply come across as more dashing, heated, and convincing via the 751. It's unbelievable how confidently the unit keeps track of the multitude of sounds. Some of this sound reminds me of the Technics SL-1000 R, whose bass performance I still consider the benchmark. This also works with more robust material: Swedish retro-rockers „Asteroid" are certainly not suspected of caring about audiophile virtues. However, over the 751, their 2016 debut rolls dirtier and heavier than usual. And not even the vocals are lost in the noise of the guitar - great class. Well, dear readers, this one could be the table for the lonely island!

Holger Barske

The wired remote control is, of course, included

Altmann Industrieelektronik 751

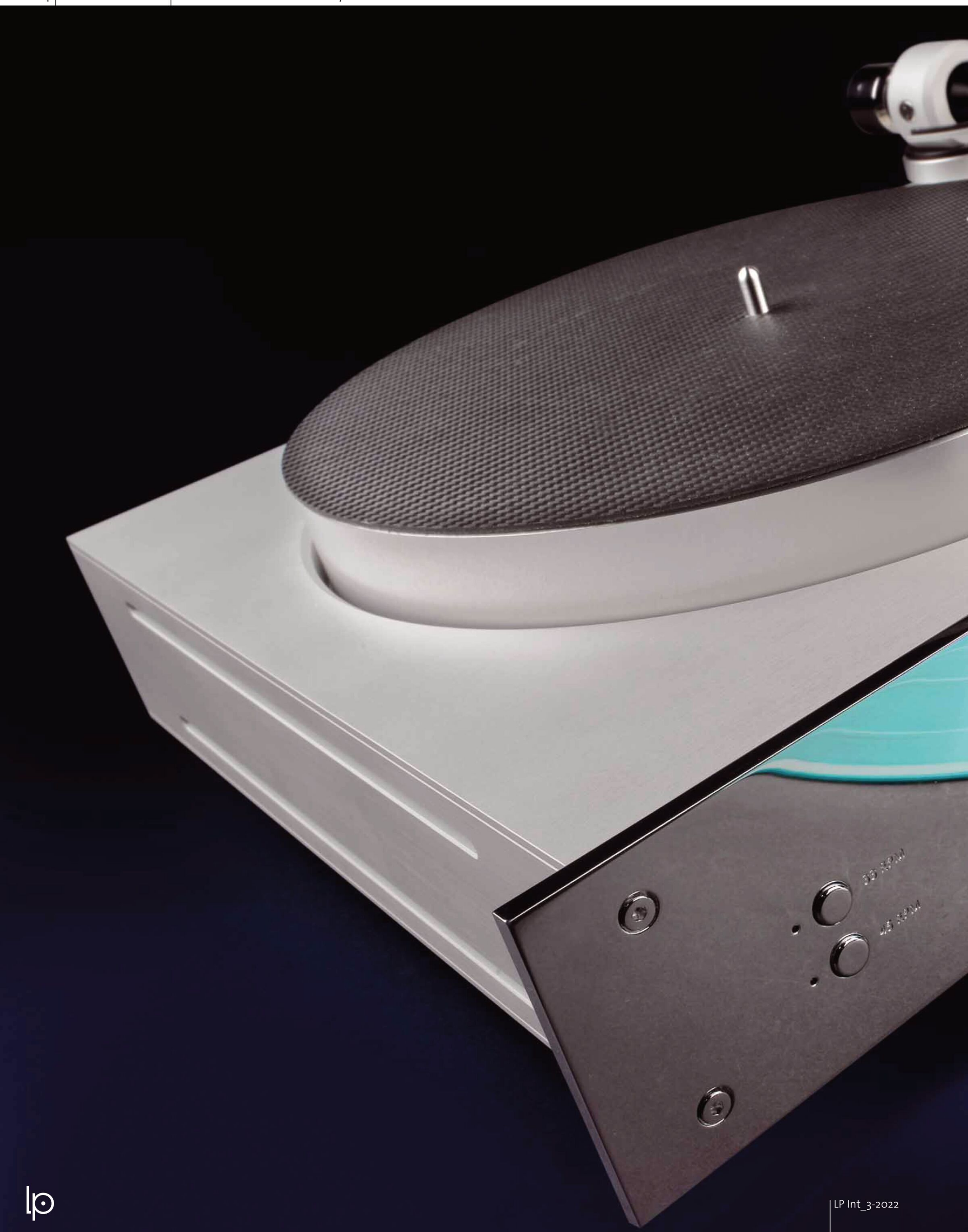
· Price	approx. 34,600 Euro
· Distribution	AIE, Mainz
· Phone	+49 6131 5537746
· Internet	aie.de
· Dimensions (W x H x D)	474 x 140 x 383 mm
· Weight	approx. 22,5 kg

lp

Altmann Industrie-elektronik 751

International 3/22

» Compact, simple, absolutely smooth in handling, and an absolute stunner in terms of sound: This edition of the Technics classic is definitely worth a sin.



A Perfectly Logical Addition

With the Model 217, the Berlin manufacturer Burmester presents the second turntable in the company's history. We are particularly delighted about this, as we thought the capital's citizens had fallen into the trap of being a mere automotive supplier.

Aligning the plate and plate bearing markings is at least good for one‘s conscience

The „crank“ is a lift lever of a different kind – very well done

Stop, stop – don‘t panic. All is well behind the chrome-plated thick metal sheet. Burmester has created an exciting second pillar with high-quality automotive sound systems, but the classic home hi-fi segment still forms the company‘s backbone. It is also true that the company‘s model policy has been - let‘s say it carefully - conservative for many years. In other words: The presentation of a new Burmester device happens about as often as a brightly shining comet in the earthly night sky. They present new loudspeakers occasionally, but things „for in front“ are only very rarely updated or even entirely new. Among the

latest additions to the exclusive Burmester ranges belong, of all things, two turntables - for the first time in the company's history. The first was the Model 175, which, as connoisseurs of the nomenclature know, was released in 2017 (and was also appreciated in detail by us). The three-motored heavyweight is recognizable at first glance as a member of the „Reference Line" and fits perfectly with the design of the most extensive Burmester series.

It's the same with the brand-new 217, except that it's immediately identifiable as a member of its subordinate „Top Line," which is the most classic of all Burmester model lines. With an (of course chrome-plated) six-millimeter front that protrudes slightly all around. Of course, there are also two of the iconic round pushbuttons and one of the typical toggle switches with a cylindrical knob.

From the front, the device is practically indistinguishable from an electronic component, but from above, it's a pleasantly simple turntable, but one with a lot going for it. The platter is an aluminum disc weighing almost eight kilograms, in which copper weights have been embedded that are decoupled with a damping mass. It rests on a voluminous cone that houses the polished hard steel platter axle. The axle is mounted in a bearing sleeve made of (presumably) bronze, and a relatively small ball absorbs the vertical forces. The whole thing is lubricated with oil, and maintenance of the bearing doesn't seem to be planned - at least, the user manual doesn't say anything about it. The whole thing is driven by two motors mounted under the platter, which act on the outside of the bearing housing via a total of four square rubber belts - in principle, this serves as a sub-platter. Integrated electronics control the two motors, and the power supply is also housed in the unit. Thus, the 217 is a member of the rare turntable type, into which you can simply plug a power cable and do not have to bother with external power supplies.

The device's casing is not actually one but merely a mighty aluminum block in which a milling machine has created recesses for the components to be accommodated—the result: a whopping 31.5 kilograms of total weight despite relatively compact dimensions.

The device is operated via the two buttons for speed switching and the toggle switch that decides about operation, standby, and „off." Nothing else. A speed adjustment is not provided (at least for the user) and is not necessary.

The 217 is only available as a complete package with tonearm and cartridge, which puts the total price of EUR 20,000 into perspective. The tonearm is a gimbal-mounted model with a nine-inch carbon fiber tube. An imposing metal cylinder forms the bea-

Burmester keeps very quiet about the merits of the cartridge, but it knows how to convince

Teammates

Phono preamplifiers:
· DS Audio DS 003
· Malvalve preamp three phono

Integrated amplifiers:
· Thivan Labs 811 Anniversary

Loudspeakers:
· DIY Focal / JBL

Competitors

Turntable:
· TechDAS Air Force III / Reed 3p / Reed 1x

Cartridges:
· DS Audio DS 003
· Ortofon Per Windfeld Ti

Bibi Ahmed – A cocas / I midi wall

What we played

Bibi Ahmed
A cocas / I midi wall

Thelonious Monk
Big Band And Quartett In Concert

Kungens Män
Bränna Tid

Tool
Fear Innoculum

The 217 is visually a pleasantly simple affair and fits perfectly into the „Top Line“

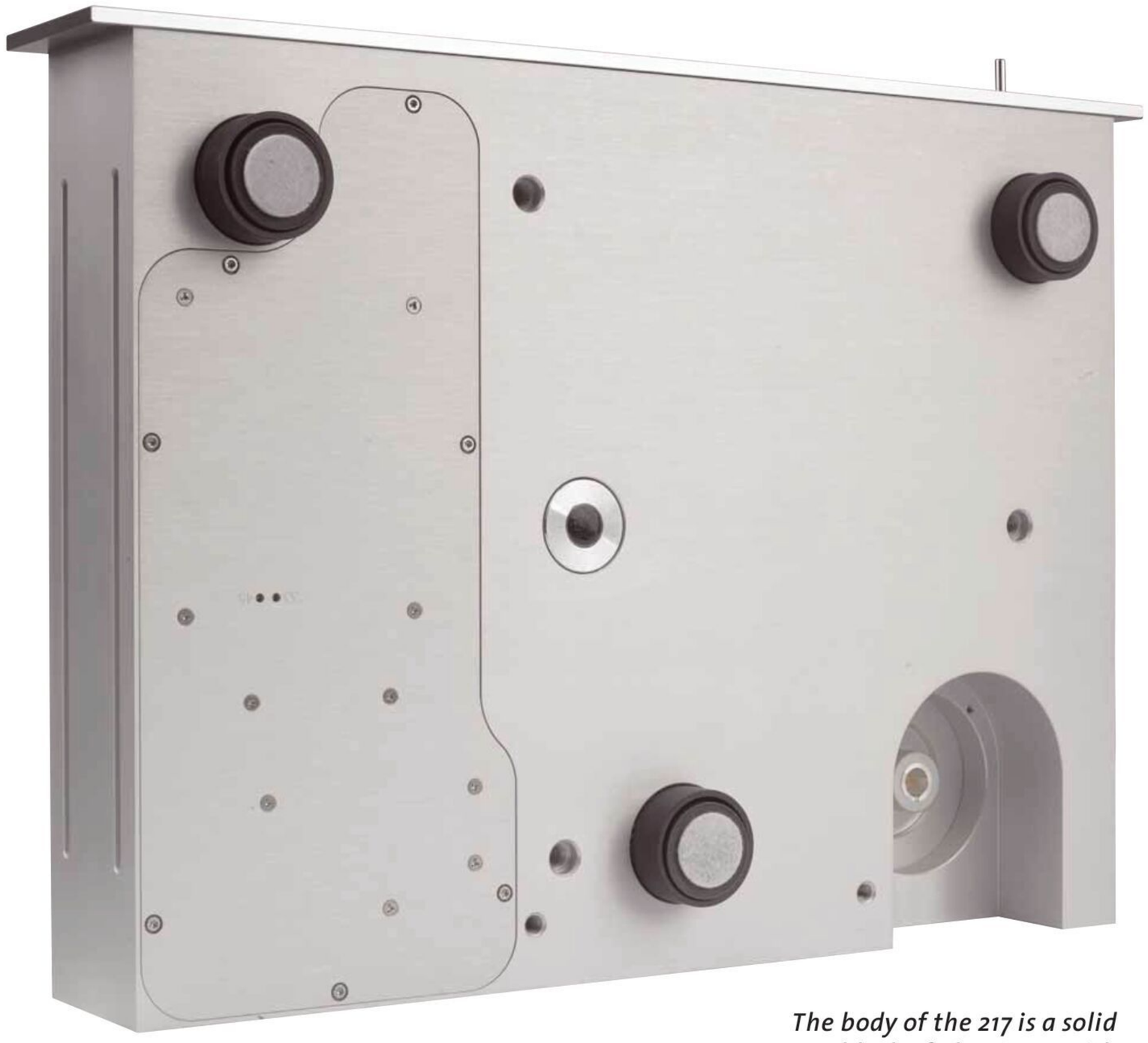
Although the suction lifter actually belongs to the 175 model, it also makes an excellent choice when mounting the 217 plate

ring housing. The bearings for the vertical arm movement are housed there. The bearings for the horizontal are mounted on the shaft. The arm is height adjustable, and the azimuth can be varied by twisting the headshell. Its position on the turntable is fixed, so overhang and offset can only be changed by the cartridge‘s position in the headshell.

Speaking of the cartridge: Burmester is very cautious about the pickup. The diamond with a Shibata cut is apparently at the end of a non-metallic stylus cantilever, and the generator is in a solid aluminum housing. But that‘s it with the verifiable parameters.

Actually, it‘s not my cup of tea to be so incapacitated when setting up a turntable, but I definitely couldn‘t do much here. The two platter speeds of the 217 are right on point – good. The tracking weight is set to 25 millinewtons, which is difficult to shift – it‘ll be fine. I am much surer about the azimuth, which fits perfectly when che-

cked by measurement. The geometry also seems straight, even if I don‘t know exactly which geometry Burmester used to adjust the cartridge. Required terminating impedance? No idea, the manufacturer is silent here as well. So I connected the unit – symmetrical, of course – to the MalValve preamp three phono and set it to 100 ohms.
I put an album by the fascinating Tunisian blues musician Bibi Q Ahmed, whom I know pretty well, on the plate. Oh - for just out of the box? Excellent! The Burmester set immediately delivers an impressively large stage and a nicely cohesive performance. The tonal balance is not yet where it should be, so up with the terminating impedance. That works, it becomes much less buzzy around the bottom end, and the refined and nuanced high range emerges much more credibly. At 400 ohms, I stop adjusting the impedance; at this point, the sound is perfectly balanced in my setup. What remains to be done? Nothing! Sit down and listen to music. Bibi Ahmed‘s slightly strange blues develops its typical



The body of the 217 is a solid block of aluminum with cutouts in the necessary places

Two motors and four belts provide the drive of the device

hypnotic radiance and sucks the listener into the action. Yes, the cartridge has had several hours of play-in time, but I find it amazing that the overall performance is already so good at this point.

What's interesting about handling the 217 is that it feels good to the touch. Usually, you need much more nimble fingers and a certain sense of filigree to operate a turntable. This is not so evident in the Burmester. It starts with the somewhat protruding finger bar on the headshell, which even less experienced users can use to position the cartridge unerringly. The lift lever with its „crank handle" is also a sure-grip affair. In the lower area, however, the oil damping draws attention with „smacking" noises. This is not bad, but it slightly spoils the perfect overall impression. Let's maneuver the cartridge over Thelonious Monk's Big Band-assisted concert from 1963. Yes, the 400 Ohm terminating impedance fits: The horns have the right amount of sparkle and drive, the double bass swings, and the bass drum has energy but doesn't thicken up. If you want to go one better in this league, you have to spend more. My Air Force, Reed, and DS Audio system can do the same and scores with a broader and deeper space and even more articulation in the bass. The direct manner in which the Burmester places the brass solos at the front edge of the stage and conveys heat and enthusiasm is hard to top, though.

Copper weights are embedded under the cushioning mat on the bottom of the plate

Sort with style

Crafted steel markers

www.artab.de

One more thing I learned from practical experience with the machine: I would recommend that you do not switch off the motor every time you change a plate (or turn it over). The two motors accelerate the heavy plate quickly back up to its nominal speed, but the drive belts slip audibly every time - this will not help their service life. And I found myself checking several times whether all four belts were still in place. They were, so the all-clear is given. Meanwhile, we're again enjoying one of the incredibly relaxing albums by Swedish Krautrockers Kungens Män, whose insistent, unerring rhythms are just right for the 217's vigorous pace. An excellent, completely trouble-free turntable.

Holger Barske

The tonearm is a gimbaled model with a good nine inches of effective length

Burmester even adjusts the counterweight at the factory and secures it against rotation with a screw

Burmester 217

· Price	approx. 19,900 Euro
· Distribution	Burmester, Berlin
· Phone	+49 30 7879680
· Internet	burmester.de
· Dimensions (W x H x D)	482 x 165 x 283 mm
· Weight	approx. 31.5 kg

lp

Burmester 217

International 3/22

» Pure Burmester: The 217 is an entirely coherent overall package, is very easy to put into operation, and sounds extremely powerful, stable, and cohesive. Definitely the perfect complement for a system from Berlin!

33
45
THORENS

Miracle Cure for Lack of Drive

An estimated 98 percent of all turntables on the hi-fi market are belt-driven designs. However, a small group of the indomitable believe this is not the way to bliss.

The direct-drive motor runs quietly and at a stable speed

The first, of course, was Technics. The Japanese invented the direct drive in the late sixties and made it popular in the world‘s radio studios. The concept‘s rapid start and stop times were real advantages here, and DJs in the clubs soon became interested in them as well. And so, slowly but surely, from the mid to late seventies, the direct drive began to take over turntable world domination. The development was suddenly slowed down by the appearance of the CD, which initially sent the turntable into a deep slumber. However, once the initial shock was over and turntables proved astonishingly resilient, the days of large quantities and expensive engine developments were over. What could be built were turntables with relatively fast-turning motors with little torque. Therefore, the belt was essential as a „gear“ between the motor and the platter. There was no longer a market for slow and precise rotating motors like those needed for direct-drive turntables.

The TD 403 DD is visually inspired by Thorens designs of days gone by

In principle, this is still true, but there are a few exceptions. A few manufacturers have discovered the DJ turntable market for themselves and serve it with Technics-style direct drives. And that‘s why there are such engines out there. Thorens‘ owner Gunter Kürten knows this, and he equipped his top model TD 124 DD with such a motor for a reason. It works excellently, and the unit is a resounding international succCouldn‘tldn‘t it be a bit cheaper than the 8000 EUR you have to pay for such a machine? But yes! Some time ago, the TD 402 DD proved that a direct drive unit that“ is „capable“ from a hi-fi point of view does not have to be financial overkill.

If you want something a bit more refined, the new TD403 DD is the preferred means. At first glance, the 1400 EUR complete package is recognizable as a classic Thorens; the toggle switches on the left and right front are unmistakable. The construction is similar to the proven TD 402 DD but differs in some crucial points. The TD 403 DD has a much heavier (1.4 kilograms) metal platter and the very accomplished TP 150 tonearm from the belt-driven TD 1500.

What the TD 403 DD doesn‘t have – and neither does its smaller brother – is the Thorens-typical sub-chassis. This would only be a problem if the substructure for the turntable were of the more resonance-prone variety. But if you want to invest in this price range, you‘ll probably also want to provide a suitable stand. The stand should also be horizontal because the Thorens doesn‘t have a height adjustment option. With a four-digit price tag, a few words of criticism are necessary: Four damper feet of the cheap kind, screwed into a rather puny three-millimeter hardboard as the device‘s base – that‘s not very high-end. The accessories industry will certainly already rub their hands and diligently design upgrades.

Teammates

Integrated amplifier:
· Thivan Labs 811 Anniversary

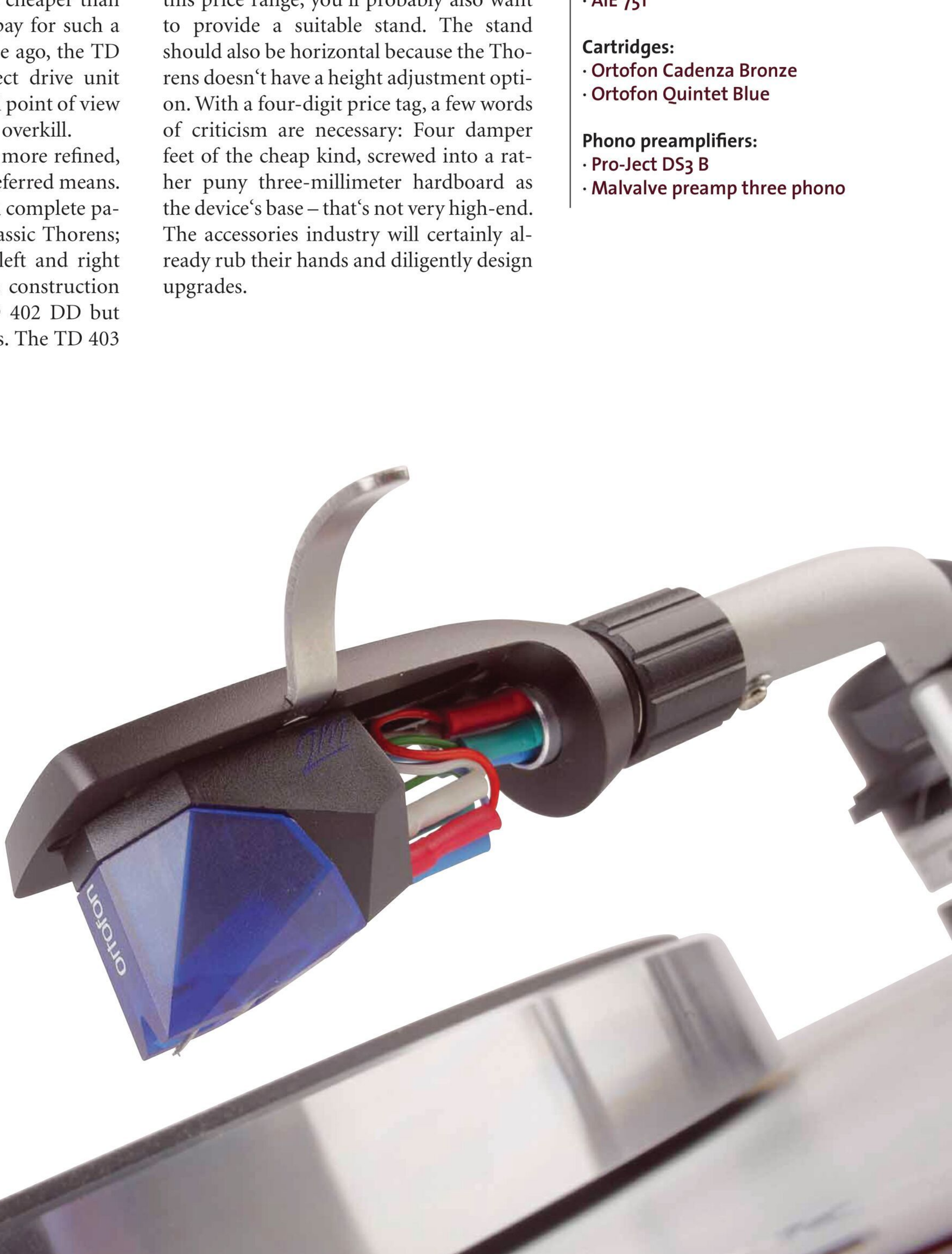
Loudspeakers:
· DIY Focal / JBL

Competitors

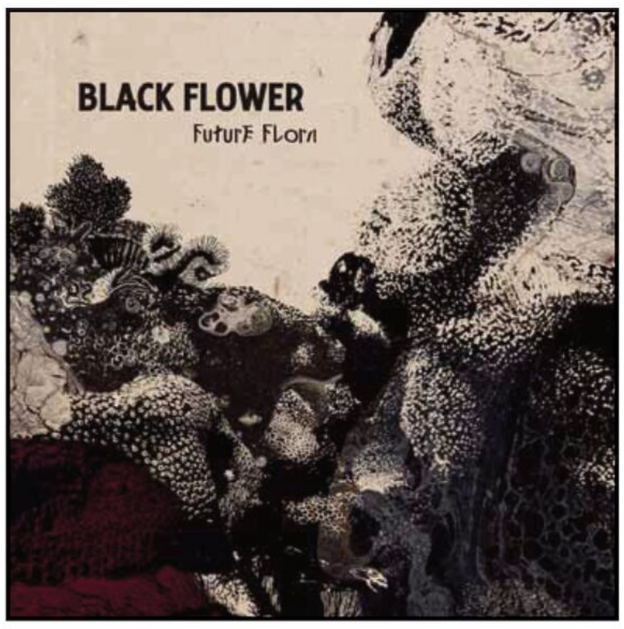
Turntable:
· Pro-Ject X8 SuperPack
· AIE 751

Cartridges:
· Ortofon Cadenza Bronze
· Ortofon Quintet Blue

Phono preamplifiers:
· Pro-Ject DS3 B
· Malvalve preamp three phono



The Ortofon 2M Blue fits well with the Thorens, but it is not the end of the line



Black Flower – Future Flora

What we played

Black Flower
Future Flora

Kungens Män
Bränna Tid

Dead Can Dance
Spiritchaser

Deep Purple
Made In Japan

A solid MDF frame is revealed underneath the said panel. The direct drive motor is screwed in the center - this should be the model we already know from the TD 402 DD. The self-contained unit is much simpler than the one that drives the platter of the TD 124 DD, for example, where the stator magnets are mounted directly on the platter - as we know from the powerful professional direct drive units.

The mills of the TD 403 DD grind a bit slower in this respect, which can already be seen in the ramp-up times of the disc. These are significantly longer than those of professional devices because there is simply less torque. However, since the user probably doesn‘t want to have heated club evenings with the device, this is only of secondary importance.

The TD 403 DD does have a speed adjustment, but it is only accessible to the service. However, since the speeds are right on point, this is only a minor inconvenience.

Let‘s turn our attention to the TP-150, a true tonearm gem. Visually, it is based on the EMT classic 929. The J-shaped nine-inch arm is a medium-heavy type and fitted with an SME-compatible headshell at the front end, which makes life very easy for anyone with ambitions to change cartridges: change the headshell with the pre-adjusted cartridge, adjust the tracking force, and you‘re done. By the way, the included headshell is a very refined but rather heavy aluminum piece. One of the highlights of the tonearm is the anti-skating device, which designer Helmut Thiele has cleverly accommodated in the arm

Very nicely solved: The anti-skating of the TP 150

The tonearm is visually based on a classic from EMT

base extension. The adjustment is made by moving a weight. For this purpose, a pin is included to reach there better. The height adjustment of the TP 150 is also very nicely solved: It is done via a large threaded ring with externally mounted holes. A pin can also be inserted here, and the adjustment can be performed precisely. The tracking force is adjusted in the old-fashioned way using a rotatable counterweight. After balancing the arm, the „adjustment disk“ on the front of the weight is turned to zero, and the duo of weight and disk is then adjusted to the desired value using the scale. This works accurately, so you do not have to use a tonearm scale. This adjustment is the only thing you have to worry about after purchasing the TD 403 DD; the manufacturer has already made all other adjustments. This also applies to the adjustment of the included cartridge. In this case, they chose the Ortofon 2M Blue, a decidedly respectable MM in the 200 EUR class. It differs from the smaller 2M Red in that it has a „naked“ elliptical pick-up diamond. This means that the diamond is shot through a hole in the stylus cantilever and is thus immovably clamped. This contrasts with the version with a glued-on diamond, which adds more unwanted mass. The 2M Blue generates 5.5 millivolts at 5 cm/s – enough so even less sensitive phono stages should have no problems.

The TD 403 DD likes impulse-rich music and makes that unmistakably clear after a few beats. Take, for example, the jazzy electro album „Future Flora“ by the Belgian band „Black Flower.“ It celebrates the interplay between horns and electronic beats. If the joy of playing is not there, it doesn‘t get going. You really can‘t state that here. It sounds extremely agile, concise, and

The cast aluminium plate of the TD 403 DD weighs 1.4 kilograms

wiry; we have an excellent overview of the funky happenings. The drums have drive, the horns emit energy and radiance, and there's real momentum at the bottom. Not bad, especially considering the relatively cheap Ortofon-MM. Could there be more? After extremely positive experiences with the Quintet Blue in the Pro-Ject X8, especially with a symmetrical connection to the Pro-Ject phono preamplifier, I transplanted the same combination to the TD 403 DD. And how much more is possible! The wonderfully dragging „K-rauta" by the Swedish atmospheric rockers „Kungens Män" lives from a profound bass drum line that carries the song rhythmically. With this setup, the whole thing gains stability and intensity. It's not the sheer force that appeals but the bone-dry precision. The two guitar lines shimmer weightlessly through the room, everything swings; everything is groove. This is how music works.

Holger Barske

Of course, the device comes with a dust cover

Thorens TD 403 DD

· Price	approx. 14,000 Euro
· Distribution	Thorens, Bergisch Gladbach
· Phone	+49 2204 8677720
· Internet	thorens.com
· Dimensions (W x H x D)	420 x 141 x 360 mm
· Weight	approx. 7.2 kg

lp

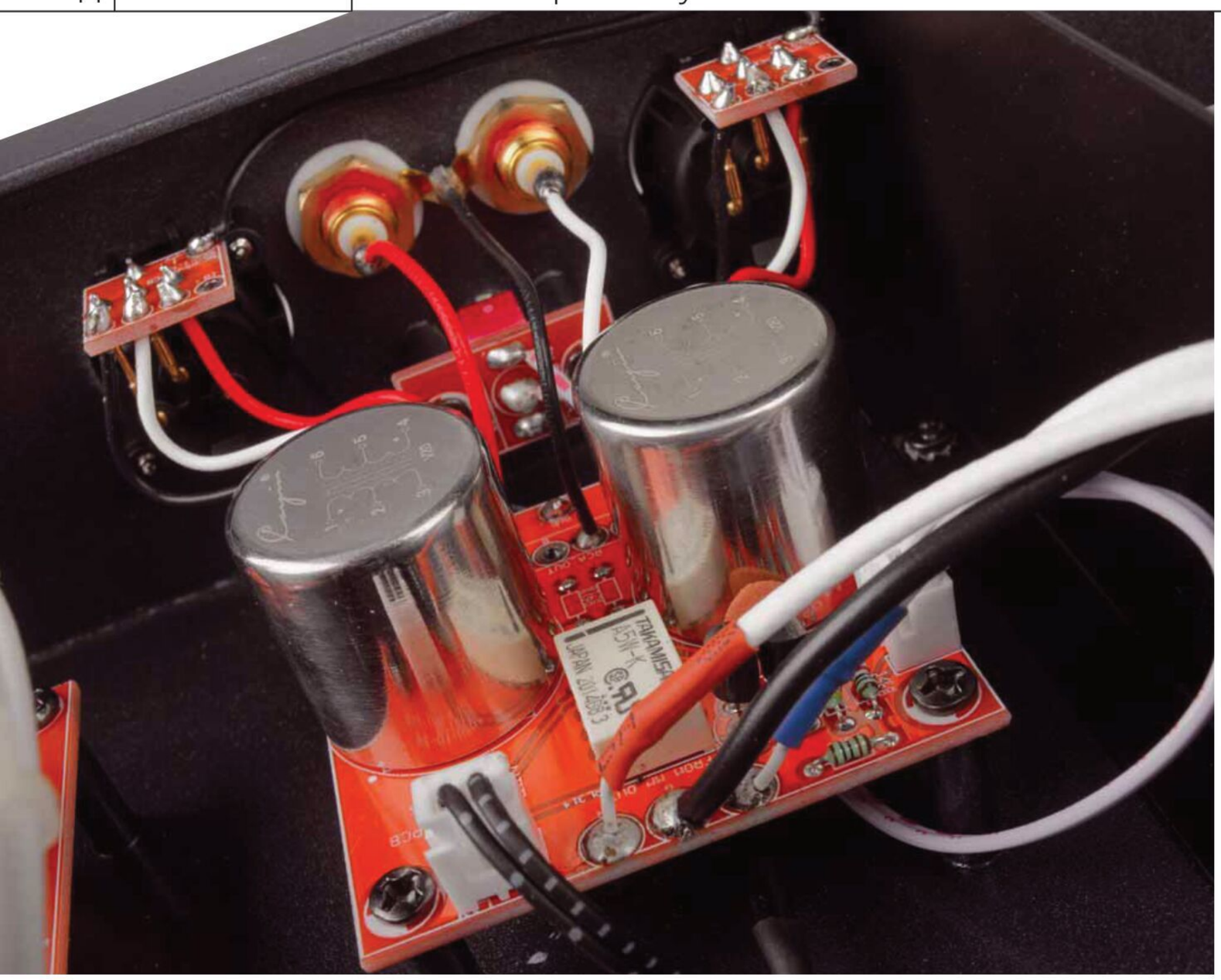
Thorens
TD 403 DD

International 3/22

» The TD 403 DD conveys pure Direct Drive feeling: It sounds extraordinarily impulsive and lively, is very easy to use, and is a terrific all-round solution to musical happiness.

Phono Pre, Seen Through

Of all the ways to build phono preamplifiers, one is still the exception: the exclusive use of tubes, up to and including MC preamplification. This one is such an exception.



The two transformers provide the symmetrical output signals

Background

There are good reasons why so few manufacturers fall for entrusting MC signals in the range of less than 100 microvolts to tubes. With such small signals, microphonics becomes a significant issue, and the large-area components inside the glass bulbs are excellent antennas for spurious radiation of all kinds. What can still be handled quite well with high-level and even phono MM signals is a real problem with adequate MC preamplification and places high demands on the tubes‘ quality and the equipment‘s layout. In the heyday of tube amplifiers, the first stage of voltage amplification was, therefore, often placed in the responsibility of transformers. There‘s plenty to read about such things in this issue of „LP.“
But: You don‘t necessarily have to do it this way, as today‘s proband proves.

The construction is mainly done on circuit boards, but the tubes are directly connected to the chassis

Appearances

It goes by the type designation CS-6PH, costs a moderate EUR 2680 considering the package on offer, and comes from the manufacturer Cayin, which manufactures in the Far East. This is a company that has gained a considerable reputation in 20 years in the field of all kinds of tube equipment and not without reason also successfully manufactures products for numerous other brands.

The new phono preamplifier from Cayin is, without a doubt, a very ambitious device. Eleven and a half kilograms of technology are responsible for nothing else but equalizing more or less tiny phono signals and amplifying them to a level that „normal“ amplifiers can handle. For this purpose, Cayin relies on eight tubes, all mounted free-standing on the chassis. The chassis is kept in an elegant metallic gray, and the paint quality is excellent. You have the choice between a black or silver anodized front panel. The tube ensemble usually works under a protective perforated metal cage, which can be mounted or removed with a flick of the wrist. Attaching this accessory with banana plugs and sockets is a trick Cayin invented many years ago and has been adapted by many manufacturers. The six amplifier tubes are also protected from external interference by shielding cups – also painted in chassis color – which is certainly not a bad idea considering the low signal levels.

Features

One MM and one MC cartridge can be connected to the CS-6PH. Both inputs can be used at the same time. The two pairs of RCA jacks are equipped with a grounding screw terminal, and on the output side, there are balanced XLR connectors in addition to the RCA output; a toggle switch selects between the two operating modes. These XLRs are genuine symmetrical outputs; two transformers directly in front of the sockets generate the corresponding signals.

The front panel houses a range of control and display elements, making the CS-6PH convenient to parameterize. There‘s the hard power switch on the left, and on the right, a rotary knob with which the input impedance can be set. In MC mode, 47, 100, 200, 470, and 1000 ohms are available. In MM mode, the knob has no effect. The standard 47 kilohms are parallel to the input sockets. Behind the rotary knob is a rotary encoder; all switching operations in the device are performed by relays directly on site - that‘s how it should be in this class. The five buttons in the center are responsible for the other settings. One mutes the output if required, one selects between MM and MC mode, and the third decides whether you want 47 or 100 picofarad termination capacitance at the MM

Teammates

Cartridges:
- Benz ACE-L
- Denon DL-103
- van den Hul Colibri Grand Cru

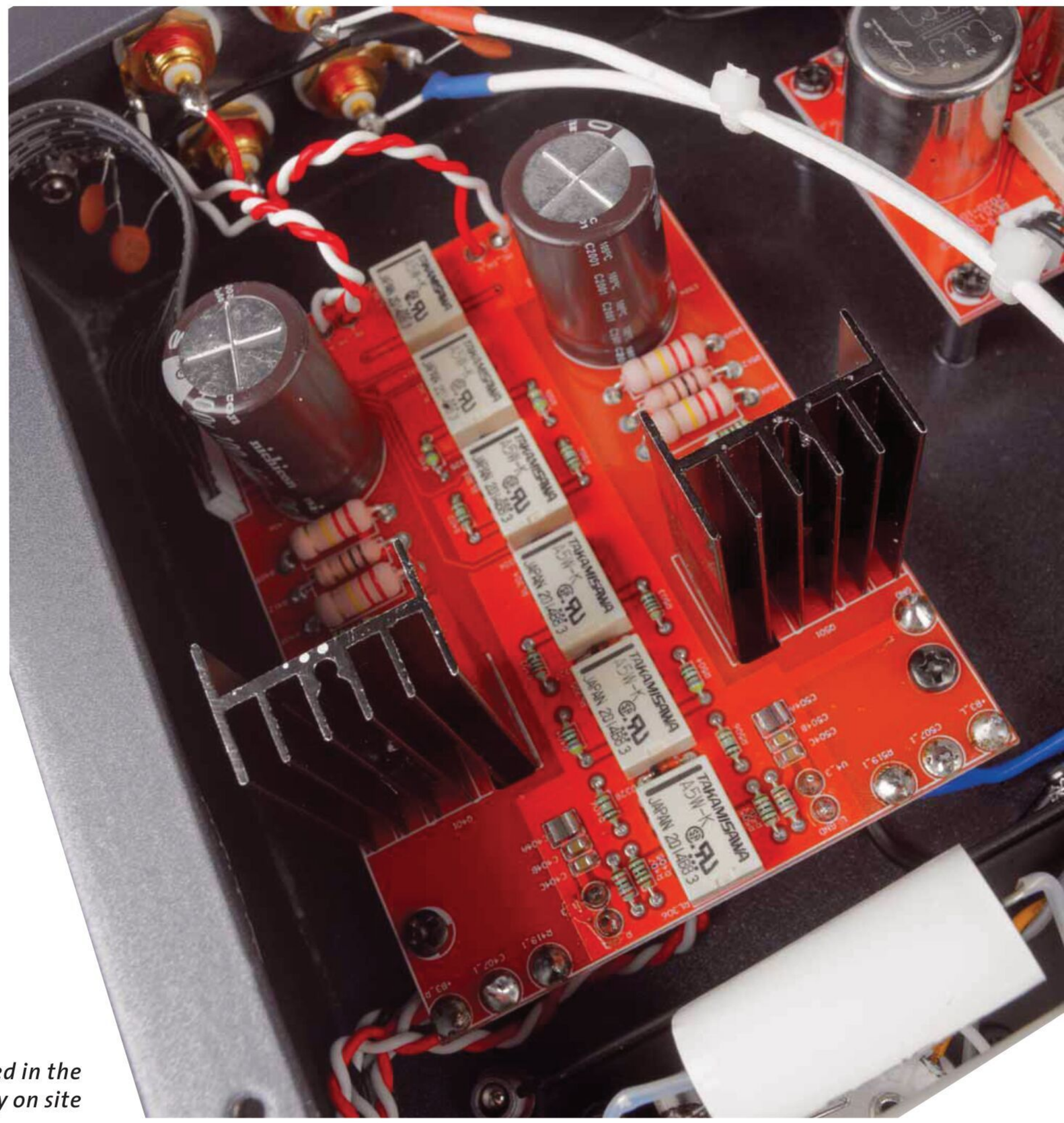
Turntables:
- TechDAS Air Force III / Reed 3p / Reed 1x
- Transrotor Fat Bob / SME M2-12

Integrated amplifiers:
- Thivan Labs 811 Anniversary

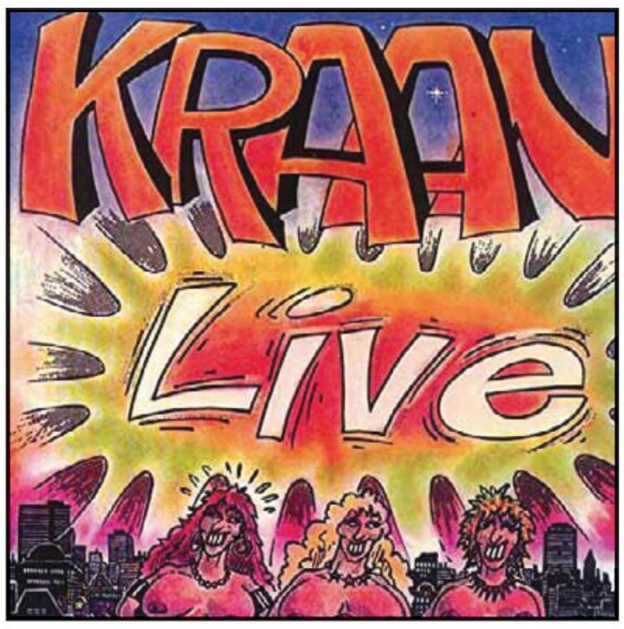
Loudspeakers:
- DIY Focal / JBL

Competitors

Phono Preamplifier:
- MalValve preamp three phono



Signals are switched in the device basically by relay on site



Kraan – Live

What we played

Kraan
Live

John Coltrane
A Love Supreme

Led Zeppelin III

Rickie Lee Jones
It's Like This

input. Number four adds the rumble filter if needed, and the last allows the selection of three different gain factors in MC mode. A maximum of about 60 decibels of amplification is possible. This is sufficient for all MCs that do not belong to the extremely quiet category; everything from perhaps 0.3 millivolts output voltage fits. The other two settings offer 55 and 51 decibels of amplification; in MM mode, it's a practical 40 decibels. By the way, the device remembers the set values so that everything is as it was set before the next time it is switched on.

Tube configuration

Probably the most noticeable tubes of the CS-6PH are the two that are not under shielding caps. They are type 22DE4, which I have never seen in the HiFi environment. These so-called „TV Dampers" from the television field are used as rectifiers. They were produced by RCA at the time and are still readily available. The idea is good; a clean supply is essential for this unit. The MC amplification is done by a 6922 per channel, which is roughly equivalent to an E88CC. Certainly one of the lowest noise double triodes and therefore the first choice in this case. The MM amplification is provided by a JJ ECC83 per channel, which is also a good choice due to its higher gain. An ECC81 per side takes care of the outputs' low impedance driving. The manufacturer puts good standard hardware everywhere, opening up a vast playground for Tube Rollers.

Interior views

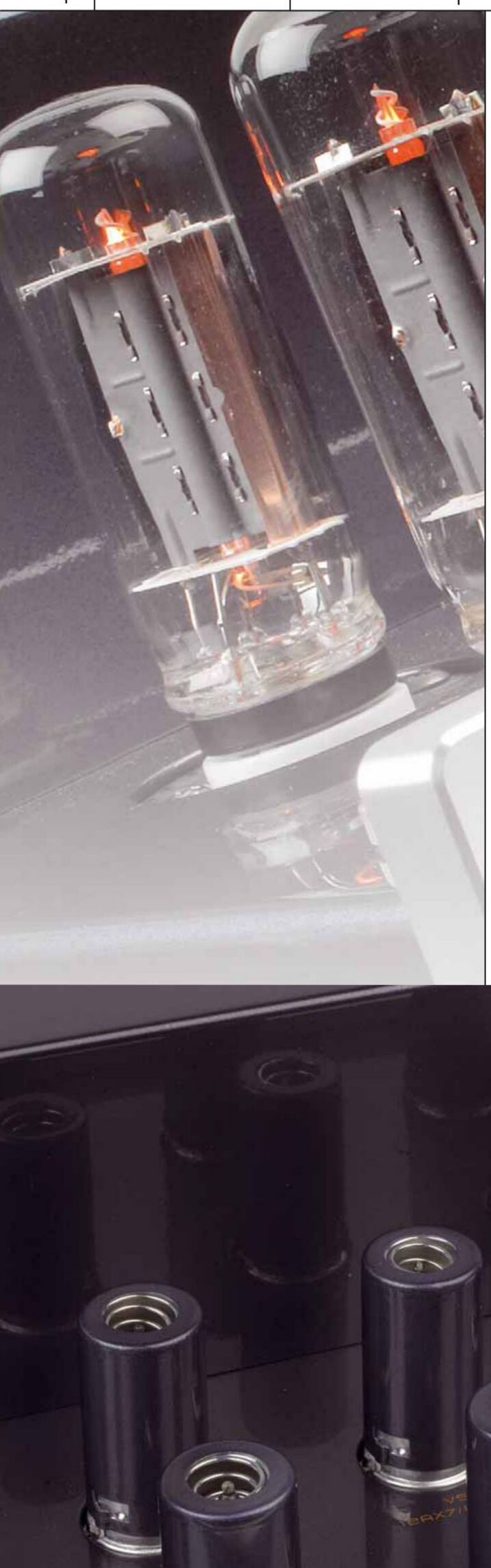
Under the base plate, there is a lot of technical effort, which was expected considering the tubes. The electronics are distributed over four circuit boards, and the tube sockets are mounted directly on the chassis. Fourteen small-signal relays take over the input configuration and the operating gain switching. The manufacturer has invested in electronically stabilized operating voltages and uses only high-quality passive components – very nice.

The Cayin phono preamplifier features a convenient operating concept

An MM and an MC cartridge can be operated at the same time on the device

Sound

The CS-6PH is a unique phono amplifier, and there are reasons for that: The manufacturer has left the path of virtue in the dimensioning of the equalization and built in a few small specialties. And these are noticeable sound-wise, which doesn't have to be unpleasant. I started the listening test with the excellently produced album „Kraan Live" from 1974, which was perhaps a bit daring to get warmed up. Notably, what drummer Jan Fride delivers there is an absolute stunner in terms of pressure and heft. No doubt the 50-hertz boost does its part, but I don't find it unpleasant. Where the connected Benz ACE L is usually cha-



racterized by tonal linearity, it spreads a real party mood in this case. Even the small plus at the upper end of the spectrum doesn‘t bother me at all.

If you are into unconditional ascesis, the Cayin phono preamp is not for you. It practically always goes one step further, swings and grooves like hell. At the same time, it sounds very smooth and relaxed, like the proverbial analog warmth.

We try it with jazz and try John Coltrane. „A Love Supreme“ once again attracts attention with a heated and lively pace. The „bass boost“ is primarily noticeable in the drums, but the effect is kept within limits, just like the shot of extra freshness in the cymbals. Here, too, a very fluid and smooth gait is apparent. By the way, the noise behavior of the tube MC solution proves to be inconspicuous in practice and even pleasant. The residual noise in quiet passages has a sonorous, unobtrusive character. When switching to a Denon DL-103, its proportion increases somewhat due to the lower signal voltage ratio, but it is still very discreet. The Denon doesn‘t seem ideal in this combination; its powerful bass provides a bit too much of a good thing with the Cayin. Surprisingly, the luxurious van den Hul Colibri Grand Cru feels right at home and plays extremely sweet, soft, and wonderfully detailed. Here, the CS-6PH‘s ability to create extremely deep spatial representations becomes noticeable.

Holger Barske

Measurements

Lab commentary

The Cayin‘s frequency response reveals a few peculiarities: In the bass around 50 hertz, there is an increase in the region of 3.5 decibels, and above one kilohertz, the frequency response also shows a noticeable upward trend. At 15 kilohertz, we arrived at about a plus of two decibels. At maximum gain (around 60 decibels), the extraneous frequency response is a respectable 48 decibels(A), and the channel level is 43 decibels. Naturally, this is better in MM mode, where both values are in the neighborhood of 72 decibels(A). The distortion is around 0.6 percent at 60 decibels gain and 0.5 millivolts at the input, and 0.02 percent in MM mode (5 millivolts). The device consumes a constant 66 watts of power.

The signal tubes are protected by shielding cups

Cayin CS-6PH

· Price	approx. 2,680 Euro
· Distribution	Cayin, Glashütten-Schlossborn
· Phone	+49 6174 9554412
· Internet	cayin.com
· Warranty	2 years
· Dimensions (W x H x D)	380 x 177 x 309,5 mm
· Weight	approx. 11.5 kg

lp

Cayin
CS-6PH

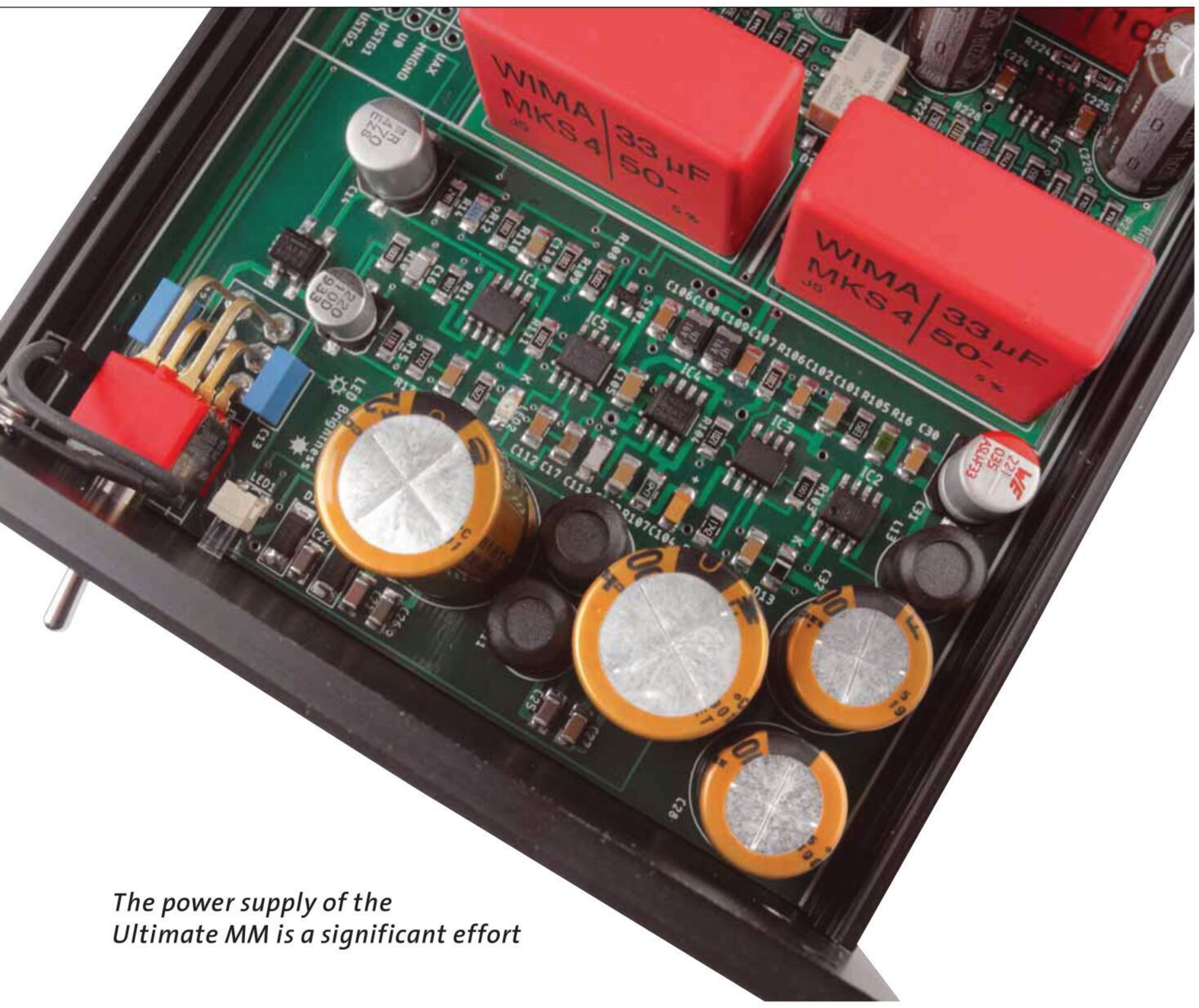
International 3/22

» A very special phono preamp with tonal distinctiveness, a very smooth and fluid gait. A lot of phono for the money!

Power

Magical Little Boxes

We have already reported about "Levar Ultimate" here – in the form of a pretty impressive turntable including a tonearm from MHW Audio. Now the brand is getting a new addition.



The power supply of the Ultimate MM is a significant effort

The crucial settings happen at the bottom of both units

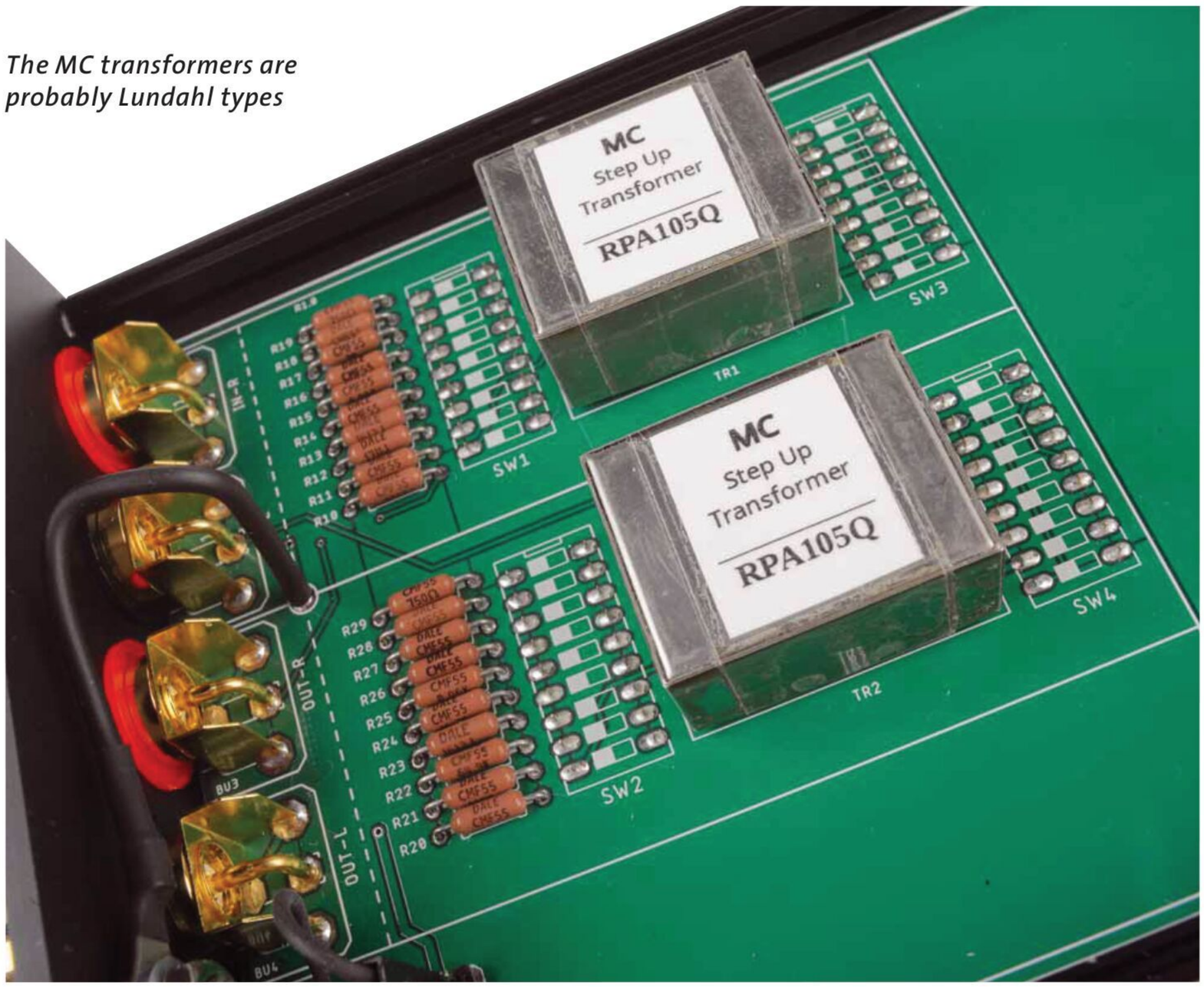
The two plain black boxes are the consistent and logical continuation of the house brand of the distributor MHW Audio, which is deeply rooted in analog. The ambitious source components require adequate processing of the signals delivered by the „front end," and this pre should do precisely that.

Concept

Nowadays, it is rather unusual to build a phono preamplifier in two parts, or even three, if you count the power supply. The situation is somewhat different with classic tube components, where the active electronics usually take over the part of amplifying signals to MM level. The MC preamplification is traditionally left in the hands of an external transformer solution. That's precisely what the developers did here - only not with tube technology, but in combination with a modern semiconductor solution. It is a good idea to separate the transformer from the active electronics, but here, the use of such a transformer is surprising: If the majority of the amplification is given to semiconductors, then it would be logical to use them for the MC preamplification as well. Of course, MHW Audio knows this, yet they preferred the not quite simple concept with the external transformer for sound reasons.

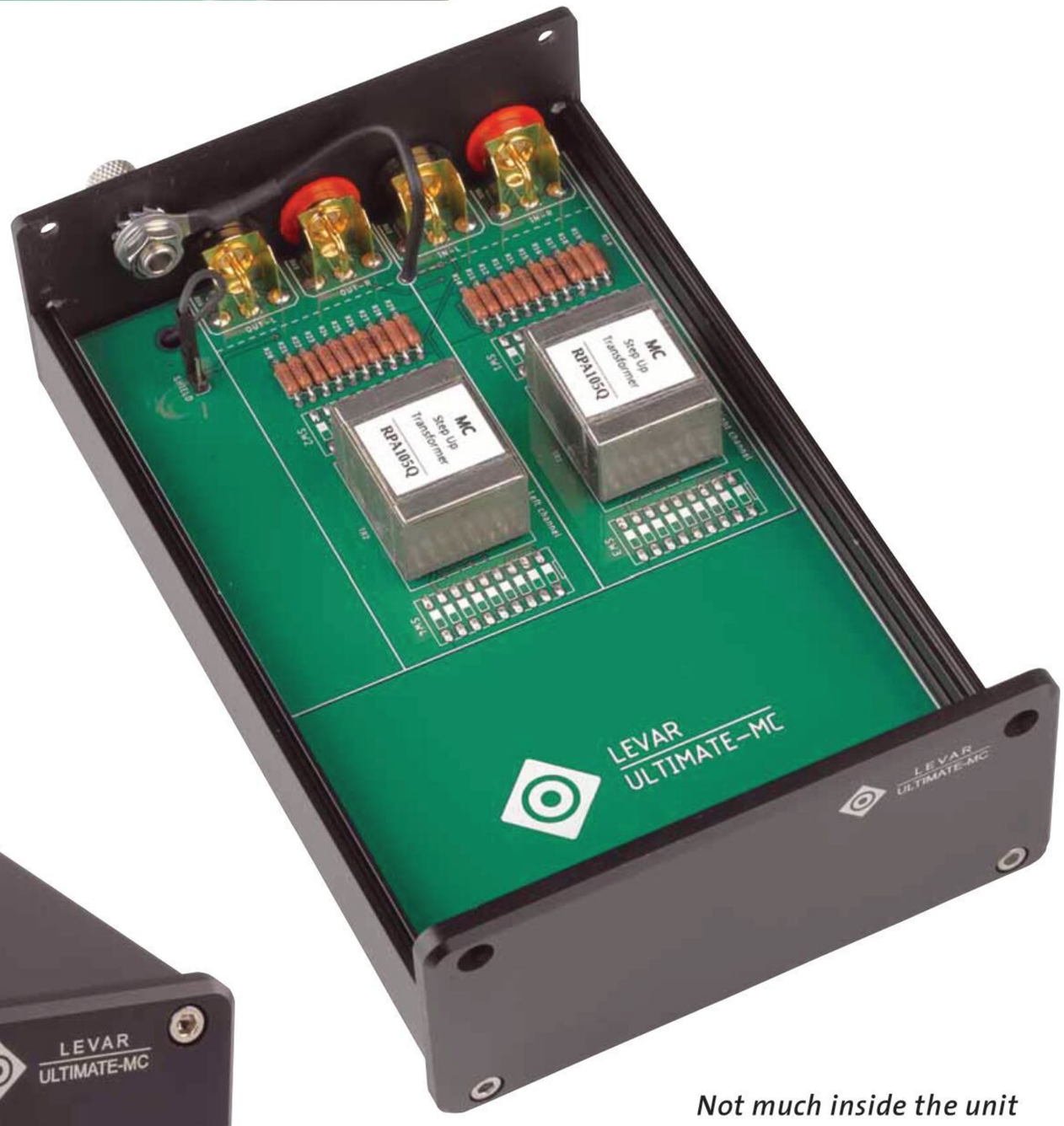
Appearances

Practically, the combination (2000 EUR per device, a bit cheaper until the end of the year) manifests itself as two compact black boxes. The frame is made of sturdy aluminum profiles, and the front end is slightly protruding and precisely finished sheet metal. That is nicely done, conveying a sense of quality. The rear panels are somewhat simpler, but you don't have to look at them all the time. The MM preamplifier has a toggle switch for the startup, and a classic red LED indicates readiness for operation. A very neat little detail in this context is the trim pot on the bottom of the unit, which can be used to adjust the brightness. You can get me with such



The MC transformers are probably Lundahl types

niceties – I have to admit that. Since we are on the underside of the device: Four switches are inserted through the bottom panel, with which you can set the device's parameters. You can adjust the gain in four steps between 37 and 45 decibels and the input capacitance in eight steps between 50 and 350 picofarads. We also take note of the pretty massive device feet with inserted O-rings.



Not much inside the unit beside the transformers

The front panel of the Ultimate MC remains empty

Teammates

Cartridges:
· Mustang MM
· Ortofon Per Windfeld Ti
· van den Hul Colibri Grand Cru Elite

Turntables:
· TechDAS Air Force III / Reed 3p / Reed 1x / SME IV

Integrated amplifier:
· Thivan Labs Sun 833-X

Loudspeakers:
· DIY Focal / JBL

Competitors

Phono Preamplifier
· MalValve preamp three phono

Hazmat Modine – Extra – Deluxe – Supreme

What we played

Hazmat Modine
Extra – Deluxe – Supreme

Rickie Lee Jones
It's Like This

Kungens Män
Kungens Ljud & Bild

Robert Coyne
The Hiss Of Life

On the back, four solid RCA jacks are screwed to the rear panel – two as input, two as output, of course. Ground terminal? Available. Just like the socket for connecting the power supply. It supplies nine volts AC and fortunately contains a real power transformer – it's not one of the ubiquitous switching power supplies that should be replaced immediately for good sound. Of course, there would still be room for improvement in the supply, but you can live with this solution for now.

The second box, Levar Ultimate MC, is like a pea from its colleague. It lacks the toggle switch at the front and the supply socket at the back - there's nothing to switch and supply here; the device works purely passively. However, there is a lot to adjust, as the four unequally more extensive DIP switch blocks on the bottom prove.

Tranformatory

The transformers are quite universal types and allow selecting a transformation ratio of 1:5, 1:10, or 1:20, corresponding to a 14, 20, or 26 decibel voltage gain. While transformers are usually simply terminated with the input impedance of the following MM phono preamplifier (i.e., the usual 47 kiloohms), this device allows you to add multiple values in parallel, allowing you to set the termination impedance of the cartridge precisely. However, this is not without its pitfalls: For each gear ratio, different values result in the effective impedance at the cartridge. The Levar Ultimate MC manual has three pages of tables with the corresponding values. Thus with a transmission ratio of 1:5, values between 40 and 1700 ohms are realizable, with one of 1:10 such from ten to 440 ohms, with

The MM preamplifier contains a lot of technology

No secrets on the connection side of the Ultimate MM

1:20 finally 2.5 to 110 ohms. In practice, this amounts to a non-trivial setting procedure because no matter what you do, two parameters change at once. But that‘s not all: The ultimately effective gain also changes with the impedances. In other words, the 1:20 setting will only have 1:20 when the cartridge is operated at the highest possible 110 ohms; anything below that will cause a gradual reduction in gain. So plan a little time for parameterizing the device. By the way, I have found it helpful to operate both boxes lying on the lid, so you have easy access to all switches.

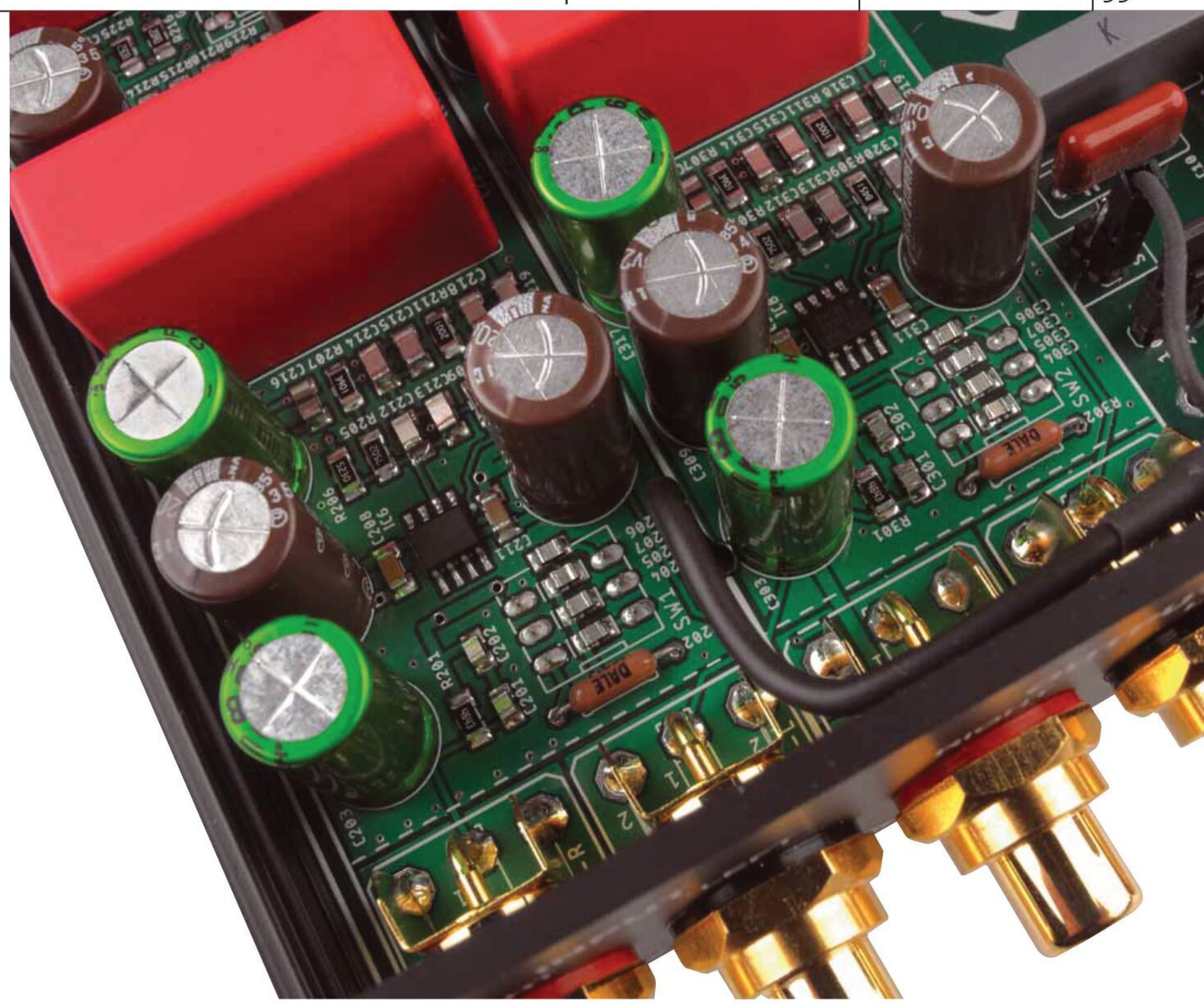
Electronics

A look inside the Ultimate MM reveals considerable sophistication for an MM preamp. The board, mostly equipped with SMD components, amplifies in three stages. The arrangement is quite complex; nine chips take care of the signals‘ well-being and generate the desired operating voltages from the supplied nine volts. Paired capacitors and tightly toleranced resistors ensure exact adherence to the RIAA equalization curve, plus there are such niceties as effective suppression of turn-on and turn-off crackles. This is not the hundredth rehash of a chip manufacturer‘s data book circuit; there were professionals at work here.

Inside the Ultimate MC, things are a little less crowded. In other words, there are two transformers, and I‘m probably not giving away any national secrets when I say they are products of the Swedish specialist Lundahl. Here recognized good models with amorphous cores are used. The switchable terminating impedances are also excellent quality types from Vishay-Dale.

Sound

First, the Ultimate MM had to show what it could do solo. Lately, the Mustang MM is my source for such cases. It has recently qualified as a highly competent cartridge. I run the inconspicuous cartridge at maximum gain on the Levar and am immediately reminded of the cartridge‘s remarkable qualities: with all the typical MM spice, the combination delivers contour, speed of attack, and subtlety that can be perfectly



The Ultimate MM‘s amplification is in the hands of SMD chips

The parameterization of the transformer requires some effort

The switch interrupts the power supply from the mains adapter

demonstrated with Hazmat Modine, the multi-headed US band that squeals, rings and crashes all around. Here it does it with urgency, zest, and oversight. The instruments are arranged around the vocals in the best way; the 2015 album „Extra - Deluxe - Supreme“ swings and grooves most convincingly. Tonal conspicuities are not noticeable. The device plays tonally neutrally in the best sense of the word.

I immediately confronted the MC transformer with a genuine „problem“: The Ortofon Per Windfeld Ti demands the full 26 decibels. And because of only seven ohms of internal resistance, this fits perfectly. Setting the terminating impedance was not easy; I finally decided not to use any additional resistors and to use the maximum possible 110 ohms. Then the Ortofon plays out all its detail obsession and relaxation; with lower terminations, it quickly seemed a bit strained. Fortunately, it was possible to run even such a quiet cartridge (0.2 millivolts) practically hum-free on the Levar Ultimate MC; you just have to be willing to experiment a bit with its positioning. The plucked double bass on Rickie Lee Jones‘ „It‘s like This“ swings really rich and powerful. The voice retains its typical scratchiness. The panorama is not huge but well delineated and believable. The bottom line is that both devices stand out with maximum transparency and minimal inherent sound, which I find particularly remarkable with the transformer solution.

Holger Barske

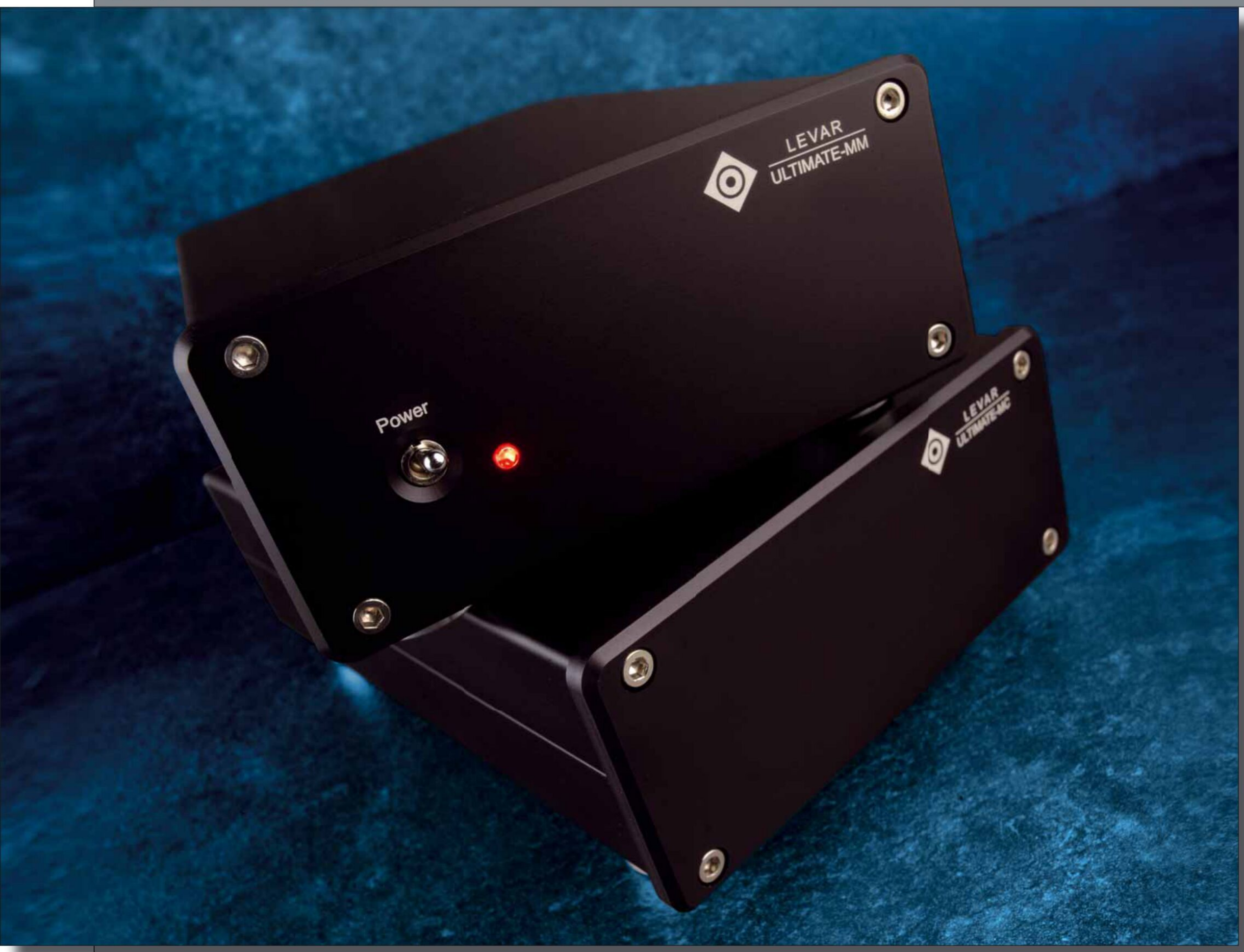
Two in, two out – the connection panel of the transformer

Measurements

Lab commentary

I'll spare you the perfectly linear and channel-identical frequency response description between 10 Hertz and 100 Kilohertz. The Levar MM preamp also knows how to score points in the lab in other respects. At 40 decibels of gain, it delivers an excellent 72.4 decibels(A) extraneous separation, and the channel separation is practically just as good. At 5 millivolts at the input, there's a tiny 0.011 percent distortion, and the current consumption is a negligible 1.6 watts.

Levar Ultimate MM / MC



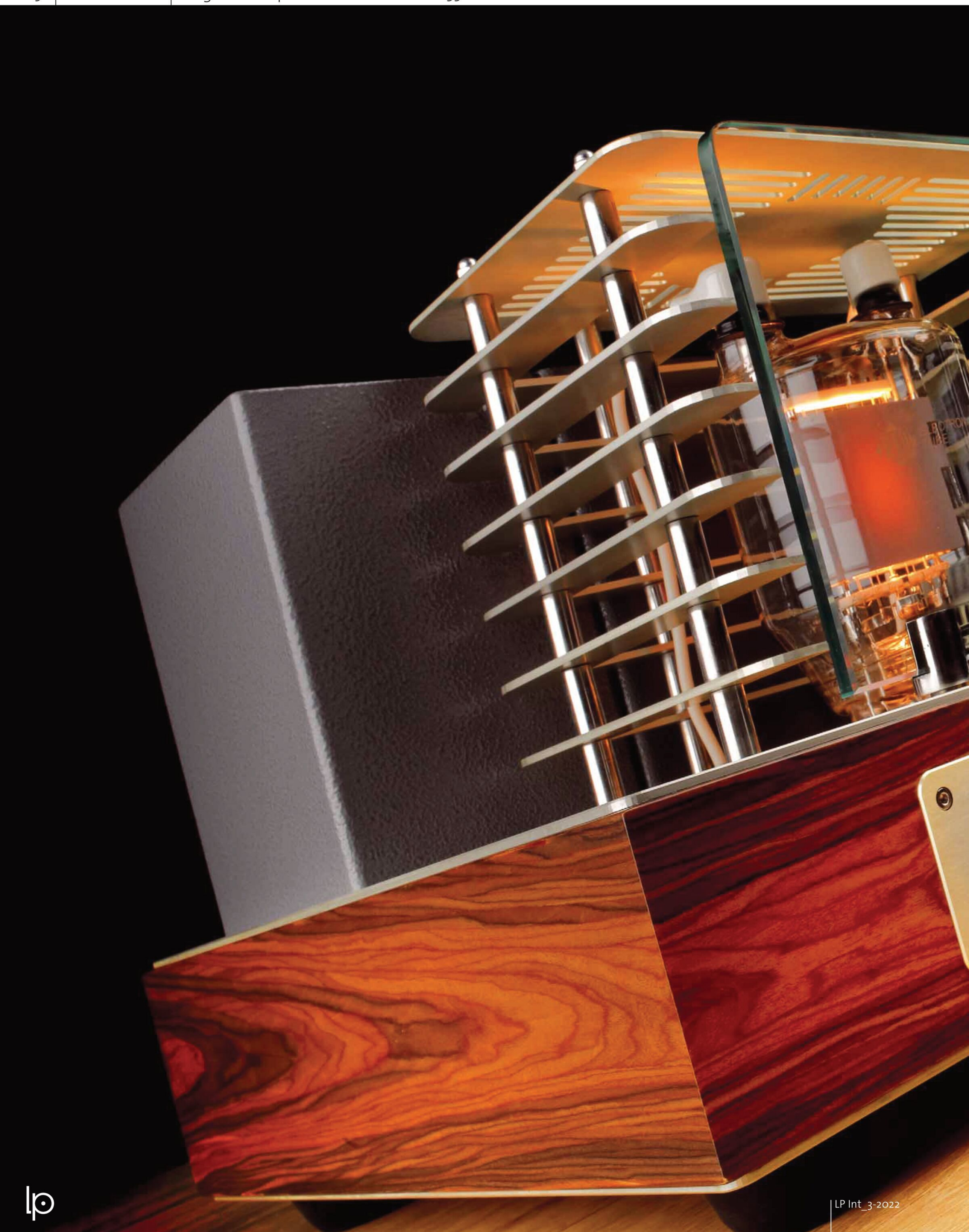
· Price	approx. 2000 / 2000 Euro
· Distribution	MHW, Sonthofen
· Phone	+49 8321 6078900
· Internet	mhw-audio.de
· Warranty	2 years
· Dimensions (W x H x D)	195 x 55 x 110 mm (per unit)
· Weight	approx. 1 kg (per device)

lp

Levar
Ultimate
MM / MC

International 3/22

» The unusual combination of a modern IC-MM phono preamp and a transformer works very well. It plays very neutrally and has power and assertiveness. The sound can be finely matched with the transformer adjustment.



A Very Hot Iron

What integrated amplifier? That's three units, isn't it?
Isn't that one preamplifier and two mono power amplifiers?

Pieces of tubing calm the individual layers of the „sheet metal“ towers

Concept

Yes, yes. Integrated amplifier. And it is in three parts because it simply would not have been feasible as a „one-piece.“ Because we are dealing here with one of the most extreme tube integrated amplifiers available on the market. The Sun-833X is a single-ended design, capable of up to 200 watts per channel. Why would anyone want to have something like this? Because they wish for unparalleled single-ended sound but don‘t want speakers typically driven by such equipment. Because: if you‘re going to stay somehow grounded in terms of power consumption, waste heat, and design effort, the world ends at maybe ten to 15 watts. As a result, you need speakers with decent efficiency. Well over 90 decibels is the minimum if you want to have fun. With the Sun 833-X, such things don‘t matter. It is a 22000 EUR monster ensemble that drives just about everything the loudspeaker market has in store. The other side of the coin (besides the price): 165 kilograms total weight and 1400 watts power consumption. Constantly. Even when no sound is coming out. This is what it looks like when you take the Class A idea to the extreme.

The manufacturer

The originator of this incredibility is the Vietnamese company Thivan Labs, which has recently built an impressive reputation with its single-ended tube amps—starting with the famous 811 Anniversary, which thoroughly shook up the market for affordable transmitter tube amps. And it has been one of the best-used units in my equipment fleet for years. As a regular reader of this magazine, you know what followed: Wonderful Thivan amplifiers with transmitter tubes of type 211 or even 805 in the output. Power was no longer an issue to worry about, but Mr. Thi was far from finished with his ambitions regarding amplifiers.

The Power Tubes

What‘s heating my living room right now relies on one 833C per channel. This is by far not the largest (glass) transmitter tube ever built, but it is pretty impressive. The 833C is a graphite anode-equipped version of the 833A, first introduced by Svetlana in the late thirties. The direct-heated triode in sausage-glass format has two terminals at the top and bottom of the glass bulb. It can handle (without forced cooling) an an-

Three units, 165 kilograms: The Sun 833-X is an extreme amplifier in every respect

ode voltage of 3000 volts and a current of 500 milliamps. Thivan Labs is content with about half of both parameters, which is still far beyond what audio tube amplifiers usually need to operate. Even heating such a tube is a challenge: 10 volts at 10 amps have to be applied to wake up the thing and let it shine its wonderfully bright, almost white light, which is inherent to the thoriated tungsten filaments.

The power module

One of these bulbs is mounted on a „power module“ of the Sun 833-X, well-protected from contact by a cage made of sheet aluminum rings. Towards the front, an inch-thick glass plate provides a clear view of the anode of the end tube, which glows cherry red during operation. What would lead to an early demise with almost all other tubes is typical with an 833C.

The power tube is the only active element in – or better on – this unit; the complete remaining signal processing, including the operating point adjustment for the power tube, takes place in the „driver module.“ But there‘s plenty of iron in the 70-kilogram power module: The driver houses the high-voltage power transformer, a filter choke for the high voltage, and the output transformer. The latter weighs in at a hefty 17 kilograms and has three taps. Loudspeakers from two to 16 ohms can feel perfectly at home here. Inside the device, you‘ll find the impressive toroidal transformer for the heating and a heating choke. The capacitor ensemble belonging to the power supply battle is more reminiscent of an early Krell monster power amplifier than a tube amplifier. However, electrolytic capacitors are only used in exceptional cases; colossal oil paper capacitors do the lion‘s share of the filtering. As usual with Thivan, the components‘ quality is beyond doubt, and there are always vintage parts that every do-it-yourselfer would love to have in the parts box.

In addition, a small circuit board controls the LED display in the front. It shows the quiescent current that flows through the end tube.

Teammates

Cartridges:
· DS Audio DS003
· Ortofon Per Windfeld Ti

Turntable:
· TechDAS Air Force III / Reed 3p / Reed 1x

Phono Preamplifiers:
· MalValve preamp three phono DIY with tubes
· DS Audio DS003

Loudspeakers:
· DIY Focal / JBL
· Audio Physic Avantera III

Competitors

Integrated amplifier:
· Thivan Labs 811 Anniversary

Typical Thivan: Spotless design with a lush use of materials

Long Distance Calling – Eraser

What we played

Long Distance Calling
Eraser

UFO
UFO2

Willy DeVille
Unpugged In Berlin

My Sleeping Karma
Atma

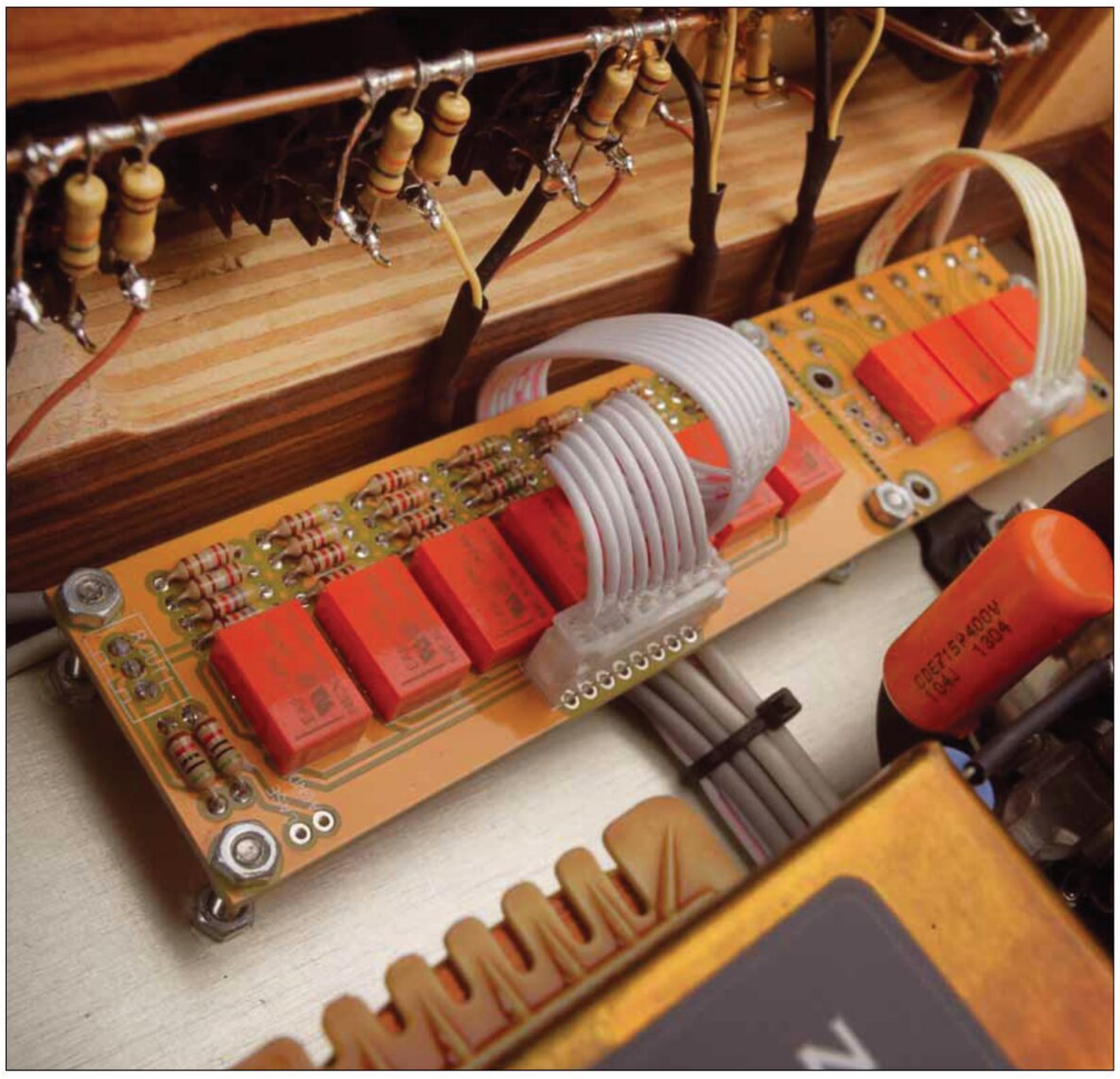
Two symmetrical and two unbalanced sources can be connected

The driver module

Compared to this, the central device of the Triumvirate, with its weight of about 25 kilograms, is almost a toy but of crucial importance. First, the input signals are connected here; there are two symmetrical and two unbalanced inputs to choose from. The tubes of the driver module are also under an aluminum cage. There is one ECC82 / 12AU7 and, per channel, one 6SN7 and one 6AS7G. The input configuration is already known from other Thivan amplifiers, the power double triode 6AS7G, on the other hand, is new and a good idea at this point – the 833 wants to be driven with plenty of grid current, and for that, it needs a potent driver. As a coupling element between driver and power tube, Thivan uses intermediate transformers for the first time, which is considered the holy grail in the „Japanese school“ for amplifiers of this type. The entire amplifier is therefore built with real triodes and runs in flawless Class A operation – what could go wrong?

There is no shortage of screen capacity in this unit

The XLR inputs are not only decoration but symmetrically wired



The quiescent current of the power amplifiers is adjusted with two potentiometers on the driver block

The switching of the input signals is, of course, done by relays

For the quiescent current setting, you have to remove the lid of the tube cage and operate the two potentiometers with a long screwdriver. The manufacturer recommends a preheating time of about 15 minutes and a setting of about 260 milliamps. In practice, the setting remains nicely stable; one has to take the hat off to how unproblematic the amplifier behaves in practice. The professionalism of a design always shows when it does its job inconspicuously. That is the case here, but only technically and not sound-wise. The characteristics of the 128-step volume control, which varies the SPL through relay-connected fixed resistors, take some getting used to. Although there is already an audible signal at step one, you have to crank it up to position 70 until you get something like a noticeable SPL. The phenomenon is even more pronounced with less efficient loudspeakers.

Sound

So? Does the giant Thivan sound as spectacular as the design effort would lead one to hope? It does. And very much so. The fact that it dynamically leaves the in-house 811 Anniversary out in the cold doesn‘t come as a surprise. The force with which it blows drum attacks on the brand-new Long Distance Calling album (to be reviewed in the upcoming issue) into the room is a bit like standing a few meters away in front of a row of 18-inch bins at the stage. This palpable low end, even at moderate SPL levels, is impressive. Apart from that, the three-piece stands out more for its wide-ranging backdrop. It presents a vast panorama, with the stage hardly knowing any limits in width and depth.

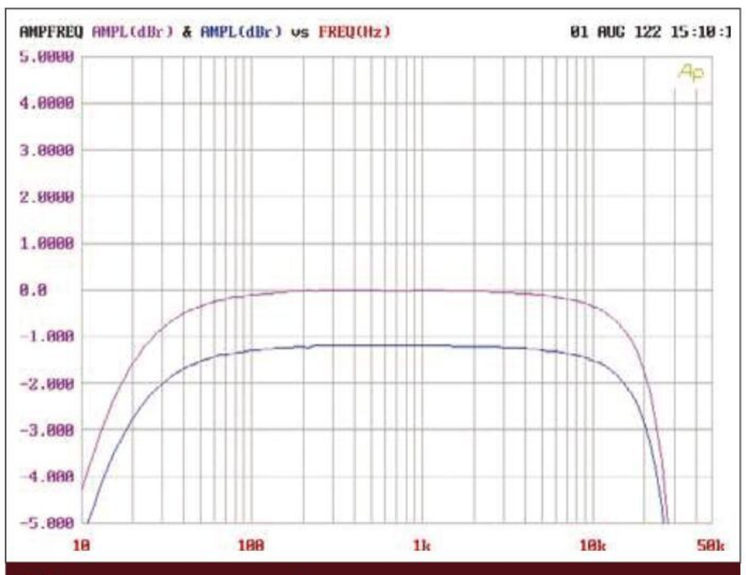
Two pairs of terminals are designed for speakers between two and 16 ohms.

One 6AS7G per channel (left) acts as a driver for the large power tubes; a 6SN7 (above) provides part of the voltage amplification

On the second album of the British hard rock heroes UFO – which, by the way, is incredibly magnificent – the level control is already set to 95, and the band's herbaceous, wonderfully improvised sound carpet rolls out in an almost dizzyingly expansive manner. This is pure atmosphere for the audiophile ear: The individual instruments are perfectly locatable. Again the impression of standing very close in front of the imaginary stage comes up. The drums once again are bone dry and superbly authoritative - you are simply right in the middle of it. Great sport.

If any further proof of the Sun 833-X's exceptional status was needed, Willy DeVille provided it with the performance of his unplugged concert in Berlin in 2011. The piano is bursting with color and power; Willy is in top form – and you can hear it. And yes, this also works on speakers that are less easy to drive than my self-built three-way speakers, as a cross-check with the Audio Physic Avantera III in the publisher's listening room showed. The fascination built up to practically the same extent. Sovereignty and size are breathtaking here as well.

Holger Barske



Measurements

Lab commentary

For such an extreme device, the Sun 833-X behaves quite well in the lab. The minus-three decibel points of the frequency response are around 13 hertz and 24 kilohertz, which is remarkable for such a large output transformer. One decibel of channel difference is due to not quite accurately matched tubes, but that's okay. The signal-to-noise ratio is a good 73 decibels(A) at one watt into eight ohms, and the channel separation is in the same neighborhood. At one watt, the unit distorts at 0.22 percent, which is also good. The distortion increases almost linearly with the output level above that, which is normal for such concepts. Therefore, the maximum output power is a matter of opinion, but it is in the region of 150 to 200 watts per channel. Independent of the output level, the machine consumes a constant 1400 watts.

Fancy Cardas speaker cables are used for the connection between the driver and output modules

Thivan Labs Sun 833-X

· Price	22,000 Euro
· Distribution	TCG GmbH, Nordhorn
· Phone	+49 5921 7884927
· Internet	thivanlabs.de
· Warranty	2 years
· Dimensions (W x H x Ddriver / power module)	
	450 x 500 x 250
	450 x 500 x 35 mm
· Weight	approx. 25 / 70 kg

lp

Thivan Labs
Sun 833-X

International 3/22

» Physically and sound-wise, the Thivan is one of the most spectacular integrated amplifiers ever. Dynamically it is in a world of its own. Intensely atmospheric and with a great deal of attention to detail.

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Coming soon:

Soulnote E-2, P-3, M-3

One oft the mosting exciting brands from Japan has just entered the European market, and we are honored to be the first to have a brief look at the company's big league components: We will review the phono stage E-2, the line preamp C-3, and the mono power amplifiers M-3.

MC Transformers Consolidated Audio

Micha Ulbrich from Berlin undoubtedly has had a brief impact on the MC transformer world over the last few years. We are about to examine two very special models of his „monster cans" and settle the question if it really has to be silver wire – maybe copper does the job as well?

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